FEDERATION OF RHODESIA & NYASALAND

SUMMARY OF DEVELOPMENT PLANS 1954 - 1957.

PREFACE.

In June 1953 an Economic and Financial Working Party, consisting of senior civil servants from Southern Rhodesia, Northern Rhodesia and Nyasaland, was set up by agreement between the three governments.

One of the principal tasks allotted to this Working Party was the preparation of a development plan for the federal area for the period up to 30th June, 1957. Bearing in mind that no federal government or civil service could begin to exist until after the coming into force of the federal constitution in September, the Working Party approached its task by inviting the three existing governments to submit plans relating to their own areas and embracing all subjects irrespective of whether or not they would ultimately become a federal responsibility.

The plans submitted, which brought existing plans up to date, are reproduced in the present Volume II (Southern Rhodesia), Volume III (Northern Rhodesia) and Volume IV (Nyasaland) From these plans a summary and analysis have been prepared, and are included in Volume I, so as to indicate the amount of finance which would be required to implement the plans. In preparing the summary the Working Party made no changes of substance in the territorial plans but extracted as a federal programme those projects which related to federal purposes. In accordance with the agreed policy that the Federal Government should not, as a general rule, assume responsibility for federal functions until 1st July, 1954, all development expenditure before this date has been regarded as territorial.

Finally, in order to provide a picture of the economic background to the development of the federal area a short survey has been included in Volume I.

Salisbury

3rd September, 1953.

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ECONOMIC BACKGROUND

1. Since the end of the war the three Central African territories have been experiencing a great expansion of economic activity. This expansion has followed the considerable interest which has been shown overseas, especially in the United Kingdom, in the economic potentialities of the area, and particularly of the Rhodesias. In all three territories the population has increased considerably as the following statistics show :-

	Total Population		European Population	
Thousands	1946	1952	1946	1952
S. Rhodesia	1,794	2,222	82	160
N. Rhodesia	1,544	1,977	22	43
Nyasaland	2,103	2,405	2	4

The most important factor from the point of view of the development of the area in post-war years which arises from these population figures has been the very large increase in the European population of the Rhodesias. The increase in the African population can be attributed to the gradual improvement in the condition of the mass of the people, and the reduction in death rates and infantile mortality rates which is producing a very rapid rate of natural increase.

2. Notwithstanding the expansion which has taken place the territories are economically under-developed and national income per head in all three is still low - the average national income per head in Southern Rhodesia is about £50 per annum. Consequently savings, though growing, are small and the rate of capital formation which can be achieved from local sources is, therefore, very limited. In fact, as before the war, the development of the area still depends on the inflow of capital, particularly from the United Kingdom.

3. The post-war period has been one of a very high sustained rate of capital inflow from external sources. The balance of payments estimates for Southern Rhodesia bring this out clearly. The adverse balance on total current transactions for each of the years from 1947 onwards has ranged from £13 millions to a maximum of nearly £51 millions. In the case of NorthernRhodesia very high returns from the export of copper have tended to mask this situation, but even there adverse balances on current account have been experienced in most post-war years. Similarly small adverse balances have occurred in Nyasaland. These adverse balances have been generally financed by an inflow of capital for both private and Government purposes. This capital inflow is reflected once again in imports of capital goods. The area produces a very limited range of capital equipment and obtains most of its requirements from the United Kingdom.

4. Imports into Southern Rhodesia are classified according to their use and information extracted on this basis for each of the last four years is revealing. It indicates that in each of these years well over 60% of imports into Southern Rhodesia by value consisted of producers' goods, and durable producers' goods tended to account for about 40% of total imports.

EXTERNAL TRADE.

5. During the post war years both Southern Rhodesia and Nyasaland have shown adverse balances of visible trade, but Northern Rhodesia with a very favourable price for copper has enjoyed large favourable balances of trade. With a very high importation of capital goods the adverse balance of trade in Southern Rhodesia rose from £10 millions in 1947

to a maximum of £34 millions in 1951. During 1952 the growth in the value of imports came to a standstill and with exports continuing to rise the adverse balance of trade was reduced to £27 millions. Since then exports have continued to increase but imports for the first six months of this year were £5 million less in value than during the corresponding period in 1952. Similarly in Nysaland a favourable balance of trade in 1946 has been followed by adverse balances in each of the following years reaching a maximum of £2.6 millions in 1950.

6. In Northern Rhodesia the position has been somewhat different, and during the years from 1946 the favourable balance of trade has risen rapidly from £5 millions in 1946 to £40 millions last year. Import trade has risen in proportions similar to those experienced in the other two territories but the factor dominating Northern Rhodesia's trade balance has been the great rise in the value of copper exports since the devaluation of sterling.

7. The United Kingdom is the chief source of the import trade of each of the three territories. Between 40% and 50% of Southern Rhodesia's imports in the years from 1948 have come from the United Kingdom and during the same years between 45% and 55% of Nyasaland's imports have come from the same source. The percentage in the case of Northern Rhodesia has been between 30% and 40%. In all three territories the percentage of imports from the United Kingdom has been much higher since the "convertibility crisis" than it was immediately before. The United Kingdom is a traditional source of Rhodesian imports and in Nyasaland, although the incidence of the Congo Basin treaties has prevented the application of imperial preference, even in the 1930's almost half the total value of the import trade was with the United Kingdom.

8. The total value of the export trade in all three territories is very large in relation to national income. Even in Southern Rhodesia it is still about 50% and in the other territories is much higher. This relationship indicates the nature of the three economies.

PRODUCTION

9. The three territories are still primarily producers of raw materials for world markets. Nyasaland's exports are agricultural products, Northern Rhodesia's are almost entirely minerals and Southern Rhodesia's a mixture of minerals and agricultural produce with, in recent years, a growing export trade in manufactured goods. Under federation for as far as one can foresee this pattern is likely to continue in the main, though it is hoped that exports of manufactured goods to other parts of Africa will continue to grow.

10. In pre-war years gold was Southern Rhodesia's chief export, but throughout the post-war years the output of gold mining has tended to fall and although the devaluation of sterling, and more recently the sale of gold on the free market, have greatly increased the price received, gold has progressively become of less significance in the country's economy. In post-war years tobacco has become the principal Southern Rhodesian export and now accounts for upwards of one-third of the total value of domestic exports. The production of base minerals has considerably increased and exports of asbestos have overtaken those of gold. Production of chrome ore has been limited by inadequacy of railway transport capacity, but as the transport situation improves the movements of chrome ore to Beira are steadily increasing. Hides are still an important export. An interesting development has been the export of manufactured goods, principally of cotton textiles and apparel, to the Union of South Africa, which since 1948 has attained considerable proportions reaching in the case ofapparel round about £3 millions per annum.

11. Northern Rhodesia's export trade is almost completely dominated by minerals. Last year, for instance, over 90% of Northern Rhodesia's exports consisted of copper, cobalt, lead and zinc. Nyasaland's chief exports are tobacco and tea which on the average account for about 75% of the total value of domestic exports.

In favourable years, however, Nyasaland tends to have a surplus of maize which helps considerably in meeting deficiencies in the Rhodesias.

12. The composition of the export trade thus gives a general indication of the nature of economic activity within the three territories. In Northern Rhodesia mining, particularly in the Copperbelt, is the most important source of employment. In Nyasaland production is almost entirely agricultural with tea and tobacco being the principal cash crops. In all three territories, however, the old familiar pattern of subsistence agriculture by the native peoples still exists and is responsible for a very large part of the output of food. In Northern Rhodesia, however, the development of mining has encouraged the production of foodstuffs as a cash crop particularly along the line of the railway by Europeans. Moreover, European farmers in the railway belt and in the east near Fort Jameson are considerable producers of flue-cured tobacco for overseas export.

13. The economy of Southern Rhodesia is more varied and its emphasis has changed to some extent since the war. Subsistence agriculture is still important in the native reserves but there has been an extension of African production of cash crops, particularly grains and cotton. European farming has, however, always been important in Southern Rhodesia and the growing of tobacco which was founded many years agoHas attained great significance in the last decade. Mining has already been mentioned and here Southern Rhodesia comes in as a supplier of coal to all the Central African territories. An interesting development, has been the progress of manufacturing. Southern Rhodesia was originally settled as a mining and farming country, but manufacturing has now assumed considerable importance. Comparing the gross output of agriculture and mining with the net output of manufacturing in recent years, European agriculture is still first but manufacturing has overtaken mining and is little short of agriculture. Agriculture here, of course, excludes the production of the native areas and on the basis of employment in the European area alone is still the most important activity. In 1951 European agriculture and forestry employed about 220,000 persons of all races. Manufacturing employed about 70,000 persons and mining a slightly smaller number.

FOOD.

14. There has been a very large expansion in food farming since the war, but as has been indicated, production of the basic foodstuff, maize, has tended to be insufficient to meet requirements except in the case of Nyasaland. All told over the seven years 1946 to 1952 Rhodesias were net importers of about 400,000 short tons of maize. An important reason for this deficiency has been a series of unfavourable seasons, and in Nyasaland poor seasons followed by a severe drought in 1948/49 limited the contribution which Nyasaland might have made to remove deficiencies in the Rhodesias. Indeed as a result of the drought Nyasaland was obliged to import maize during 1949/50.

15. The expansion in food farming can be shown by the increase in acreages planted. European maize acreages in Southern Rhodesia have risen from 252,000 in 1947 to 374,000 in 1952, most of which were planted with hybrid maize, and in Northern Rhodesia for the same years from an estimated figure of 49,000 to 102,000. In Nyasaland until recently the European estates tended to depend entirely on African production to meet their maize requirements. Since the war, however, their maize acreages have risen and the total European acreage under maize trebled from 1946 to 1950 to about 10,000 acres. Pastoral and dairy farming has also increased throughout Central Africa, but the area still imports practically all its requirements of wheat and sugar.

16. The problem facing the Federation is that of ensuring an expansion of food production commensurate with the rapid increase in population,

both European and African, in the light of the rising standard of living in the latter, and the tendency for an increasing proportion of that population to be engaged in activities other than farming. Moreover in all three territories attention has been and will continue to be directed to improving agricultural methods, raising productivity and protecting the land from soil erosion and livestock from tsetse fly.

17. The Development Plans, as well as current revenue expenditure, make provision for agricultural and veterinary research, rural development and the increase of food production by the development of irrigation as well as dryland farming. Southern Rhodesia, for instance, is proposing to start a scheme for irrigation on the highveld near Salisbury and both Southern Rhodesia and Nyasaland will continue investigations into the possibilities of large irrigation schemes in the Sabi and Shire Valleys, respectively. Moreover, in connection with further investigation of the Kariba Hydro-electric Scheme, Southern Rhodesia is undertaking soil surveys to assess the irrigation possibilities of a large area below the proposed dam site. In addition Southern Rhodesia will be expanding the production ofsugar under irrigation at a Government-owned estated near Fort Victoria while a private company has started a project for growing sugar cane in the Lower Zambesi Valley. It is expected that when these two schemes are brought to fruition the Federation will be largely self-supporting in sugar.

COMMERCIAL CROPS.

18. The chief commercial crop grown in each of the three territories is tobacco. A great increase in tobacco growing has taken place since the war, mainly for the United Kingdom market. Tobacco had been grown for many years before the outbreak ofWorld War II and in spite of many difficulties had become well established. In Southern Rhodesia and Nyasaland a regular system of marketing through tobacco auctions had been introduced. In the Rhodesias tobacco growing is carried out on European farms and post-war expansion has largely occurred in the growing of flue-cured tobacco although there have been increases in the production of fire-cured tobacco and varying experiences with Turkish tobacco. In Nyasaland most of the crop is African grown and is purchased by the African Tobacco Board and graded before being put on the auction floors at Limbe. Total output of Virginia flue-cured tobacco in the Rhodesias has risen from 61 millions lbs. in the 1946/7 season to around 110 million lbs. The last two Southern Rhodesian crops have been around the 100 million lbs mark and it is estimated that given a good season production would be about 25% greater. Total production of all types of tobacco in Nyasaland is now well over 30 million lbs. in a good season.

19. Tea is Nyasaland's second export and is the principal product of the European estates. There is also a small but expanding production in Southern Rhodesia. Exports of tea from Nyasaland amount to about 15 million lbs. a year.

20. Cotton is another important commercial crop. At one time cotton growing for the United Kingdom was the principal activity of European estates in Nyasaland but acreages had fallen to a negligible level by 1939. They have since recovered to some extent but cotton is very suitable as a peasant crop and the decline in European acreages was associated with the establishment of cotton as an African cash crop. Unfortunately yields vary very much with the season. Nyasaland's crop of seed cotton before ginning amounted to 18 million lbs. in 1948 and in the drought year of 1949 fell to less than 4 million lbs, but this year is expected to be about 20 million lbs. Cotton production in Southern Rhodesia has also been stimulated in recent years by the establishment of a cotton manufacturing industry by the Government. As in Nyasaland the size of the crop varies with the season but the acreage put to cotton by Europeans increased from 2,000 in 1946/7 to 37,000 in the 1951/2 season and by Africans from a negligible acreage in 1947 to 22,000 acres in 1952.

21. Interesting developments in post war years in the production of crops have been in tung in Nyasaland and wattle in Southern Rhodesia. The acreage under tung rose during the war to 10,000 and has since increased to over 18,000 in 1950. In Southern Rhodesia large areas in the Eastern Districts have recently been planted to wattle since the war and plant has been installed for the production of extract for export.

22. Northern Rhodesia has for long been an important source of hardwoods for both Central and South Africa. Southern Rhodesia has established softwood plantations in the Eastern Districts and it will be noted that the Plans provide for the development of this activity which will become an important saver of dollar and Scandinavian currencies. Similarly Nyasaland's plan provides for work on a large scheme of afforestation of softwood in the Vipya, Dedza and Mlanje areas.

MINING.

23. The post-war years have seen a considerable expansion of mineral production in the Rhodesias. In Southern Rhodesia the output of asbestos has risen from 56,000 tons in 1946 to 85,000 tons in 1952. Production of chrome ore has similarly risen from 167,000 tons to353,000 tons, but is still below the maximum production ever attained of 384,000 tons. In Northern Rhodesia production of copper has increased from 183,000 long tons to 313,000 long tons in the same period. The only important fall has been in gold production in Southern Rhodesia from 545,000 fine ounces to 497,000 fine ounces.

24. The production of base minerals in 1952, however, is not a peak figure; it merely represents progress in the expansion plans of the mining companies. For example, production of asbestos in Southern Rhodesia is expected to reach about 120,000 tons by 1957 and the production of chrome ore can be raised to 600,000 tons per annum as soon as railway transport permits. The programme for expanding copper production in Northern Rhodesia is wellknown. Development in respect of two mines, Chibuluma and Bancroft, is taking place at present and a very large programme of prospecting is being undertaken over a wide area. Although the full benefits of this work will not have been reaped by the end of the present Development Plans, production of copper in Northern Rhodesia is expected to reach nearly 450,000 short tons in 1957. Thereafter production is estimated to rise to 526,000 short tons in 1960, about one-fifth of which will come from new mines.

25. This expansion of production in mining alone has called for increasing tonnages of coal and coke both directly for smelting and indirectly for the generation of electric power.

26. The mining industry is still the largest consumer of power generated by the Electricity Supply Commission in Southern Rhodesia and the Northern Rhodesian copper mines' demand for coal is now around a million tons per annum and is rising. The production of coal at Wankie has risen steadily from 1.8 million tons in 1946 to 2.8 million tons last year, but this expansion has been insufficient and the demand for coal and coke in 1952 was probably more than half a million tons above the supply. The latest estimates of requirements of Wankie coal and coke indicate that demand by 1957 is likely to be little short of 5 million tons per annum. A considerable expansion of coal production is therefore required and it is hoped that the Wankie Colliery Company under its new management will in time achieve an adequate production. The Company has recently gone on to the London Market for an increase in capital to undertake a programme of expansion of production, and it is hoped that by the end of the period of the Development Plans production of coal and coke will be sufficient to meet all requirements.

MANUFACTURING.

27. There are factories in all three territories but Southern Rhodesia is the only one where manufacturing industry, excluding the smelting and refining of ores, is of considerable economic significance. Nyasaland has a few factories. Northern Rhodesia has more and Southern Rhodesia has

about one thousand. The manufacture of tobacco and cigarettes from the local crop and of plywood are the chief industries in Nyasaland. Northern Rhodesia's manufacturing industry consists chiefly of the production of furniture and plywood, building materials and the processing of certain consumer goods from either local or imported raw materials.

28. In Southern Rhodesia the net output of manufacturing industries rose from £6 million in 1945 to nearly £22 million in 1952. The industries cover a wide range of activities, the most important being the manufacture of tobacco, cotton textiles and metal. Some of these industries depend on imported raw materials, but many, notably tobacco, cotton, iron and steel, asbestos cement, ferro-chrome and the processing of foodstuffs are based on local materials.

29. Government policy is generally speaking not to encourage manufacturing industry artificially. The aim has been to remove impediments, for instance, by way of customs duty where the manufacturer has to obtain his raw materials from external sources, but not to provide tariff protection against imports of the final product. Under post-war conditions, however, some manufacturing industries have undoubtedly been set up which may not prove to be economic in the long run. On the other hand much of the development has occurred in industries which can be regarded as naturally located in Central Africa. The cotton industry is an example of this and here the Southern Rhodesia Government's spinning mills and cotton wool factory at Gatooma have encouraged the growing of cotton locally and the establishment of plants by private firms for the final processing of cotton and manufacturing of clothing to meet the basic needs of the African. Similarly the processing of meat is undertaken by Government agencies and in Southern Rhodesia provision is made in the development programme for the extension of the activities of the Cold Storage Commission in this respect.

SERVICES

30. The increase in population and the expansion of production which has occurred in post-war years has created a continually rising demand for economic and social services. Many of these under present day conditions are supplied by Governments and provision for both economic and social services has been the main feature in the ten year development plans of Northern Rhodesia and Nyasaland and the successive four year plan of Southern Rhodesia. The present programmes provide for the further development of these services and the remarks on the further expansion of production, particularly of mining, which have been made earlier in this note, give some indication of the extent of the development in the provision of services which will be necessary if this increase in production is to be achieved and Central Africa is to play anything like its full part in the improvement of the external position of the sterling area.

31. The two main economic services provided directly or indirectly by Governments are railway transport and electricity.

RAILWAY TRANSPORT.

32. Separate papers have been prepared on the programmes of Rhodesia Railways and the financial position of the Nyasaland railways and if desired will be submitted, but here it is necessary to give some account of the expansion which has been achieved in post-war years and of what still remains to be done.

33. Distances in Central Africa are vast and in so far as railways are concerned the increase of production on the copper belt of Northern Rhodesia alone presents a demand for the provision of facilities covering

a distance of 1,400 miles to the seaport of Beira, the greater part of which is over the Rhodesia railway system. The tonnages carried over the Nyasaland railways are in the light of the production of that country very limited and attention here will therefore be confined to the Rhodesia Railways. The extent of the development of this system can be gauged from the following index numbers showing traffic performance as compared with 1946.

Rhodesia Railways (Excluding the Bulawayo-Vryburg section and the Shabani Railway).

Item	Year ended March, 1949	Year ended March 1952	Year ended March, 1953
Net ton miles	121	170	185
Total tonnage of goods carried	123	176	180

In order to gauge the magnitude of this expansion it must be remembered that the railway was not under-employed at the end of the war, in fact it was fully engaged right through the war years and has had no relief since. The railway itself was constructed chiefly to carry minerals and the growth of traffic in recent years has meant a major programme of improvements to the track including many new deviations as well as the introduction of new crossing points and stations to increase capacity on single line. Increased traffic has tended to find terminal facilities inadequate and major development schemes have, therefore, been required in the main centres. This is all over and above the acquisition of additional locomotives and rolling stock with a parallel expansion of facilities for housing additional staff and provision for repair and maintenance.

34. The increased capacity so far provided has thus been very great, but it is still insufficient. Mention has already been made of railway capacity limiting the export of chrome. This problem should be overcome by 1956 when the new railway which is being built to Lourenco Marques should be in operation and should overcome the problem of the limited capacity of the railway to Beira and of that port itself.

35. The principal traffic carried by the railways is coal and coke and an increase in production by the colliery on the scale anticipated will call for a further extension of facilities and for a further effort by the Rhodesia Railways. Not only is coal the largest individual traffic but it is also carried great distances, and provision has therefore had to be made for additional facilities along the line of rail north and south of Wankie as well as for the necessary locomotives and rolling stock.

36. The Rhodesia Railways have a triennium development plan which has been framed to enable the railways to cater for future transport demands which are estimated annually. The Rhodesia Railways estimate in relation to the expected delivery programme of equipment that in respect of the year 1954 the shortfall in locomotive power should be considerably less than 10% and that by 1955 power should be adequate to meet demand. Rolling stock deliveries are now closely related to traffic demands and as a result should not prove to be a limiting factor, whilst line capacity, with the coming into operation of the new route to Lourenco Marques, and the installation of modern systems of traffic control, should within two to three years' time be adequate to meet the likely needs. The continued development of production of commodities which loom large in railway working, particularly coal and copper, are likely however to call for a continuing programme of development on the part of the Railways although on a smaller scale than in recent years.

ROADS.

37. Similar problems have been encountered here. Since the war the road systems in the three territories have been quite inadequate to carry the increasing volume of traffic and major road reconstruction programmes have been put in hand. In Southern Rhodesia it has been found that the old strip roads cannot withstand heavy traffic and the whole of the main road from the southern border via Bulawayo and Salisbury to the Portuguese border at Umtali is being rebuilt. It is recognised that other main roads will also need extensive reconstruction and improvements are also being made to minor roads. In Northern Rhodesia the raising of the main roads to Class 1 or Class 2 standard forms part of the Development Programme, and in Nyasaland a similar programme is being undertaken, in the south of that territory.

38. Road construction programmes of this magnitude, however, take time, require considerable construction effort and finance and the present Development Plans merely provide for continuation of the work which has already been started.

POWER.

39. Electric power is supplied in Southern Rhodesia by the Salisbury and Bulawayo Municipalities and by the Electricity Supply Commission which covers the rest of the country. In Northern Rhodesia the pattern is more complicated; the copper companies have their own power corporation supplying the copper belt and they are the major producers of electricity in Northern Rhodesia. Ndola municipality also supplies power, Lusaka and Livingstone have Government financed undertakings and Broken Hill is supplied with hydro-electric power produced by the mines. Nyasaland produces very little power; the only station of any size is Government-owned and serves Limbe/Blantyre.

40. Increased production in the Rhodesias has led to a tremendous growth in the demand for electric power and in addition the Electricity Supply Commission in Southern Rhodesia has been endeavouring to extend its facilities to areas hitherto unprovided with electric power. To mention only the major suppliers, the mining companies in the Copperbelt and the three power undertakings in Southern Rhodesia have been increasing their outputs at a very rapid rate. For instance, the number of units sold by the E.S.C. rose by nearly 300% between 1945 and 1952 and sales in the financial year ending in 1952 were twice the figure for 1949.

41. The International Bank is participating in financing further development of electric power supplies in Southern Rhodesia by means of a £10 million loan to raise the capacity during the period up to 1953. Present and planned generating capacity is as follows :-

Megawatts	March, 1953	1955	1957	1958
E.S.C.	95	185	195	209
Salisbury	64	88	118	145
Bulawayo	83	108	108	138

The Development Plans therefore provide for the completion of development up to 1955 as planned and for certain new projects, the major one being a third power station at Salisbury.

42. The mining companies are the principal producers of electricity in Northern Rhodesia and in 1952 their power stations accounted for 90% of the total generating capacity of about 180 megawatts. Capacity is being extended to meet estimated increased in demand in the next few years and in the Copperbelt generating capacity is being brought up to about 240 megawatts.

43. With all the major power stations in the Rhodesias being coal-fired the increased generating capacity has played a big part in accentuating the demand for coal and for transport facilities. The location of theprincipal power stations hundred of miles away from the source of their coal supplies has now become a major problem. When electricity consumption was small the burden on the railways in carrying powerhouse coal was negligible. How, however, the demand for coal for power stations in Southern Rhodesia alone is around three quarters of a million tons a year and by 1957 is expected to have increased to about one and a quarter million tons a year. Coal moves in the loaded direction on the railways and, therefore, railway development can to a very great extent be directly related to increased coal traffic. To meet the continuing problems of increased capital investment in coal mining and railway transport merely to carry powerhouse coal, and to reduce the cost of electric power, attention has been directed to sources of water power. The copper companies have come to an arrangement with the Belgian Congo by which 50 megawatts of hydro-electric power will be made available in 1957 for a period of five years. In the Federal area itself the programmes provide for an immediate start on the construction of the Kafue hydro-electric scheme with a capacity of over 300 megawatts, and for further investigation and preliminary work on theKariba and Shire Valley schemes.

SOCIAL SERVICES.

44. The expansion of production and the increase of population have created a very large demand for additional social services as well as for economic services. The increase in population of urban areas has brought problems of housing, schooling and health services for white and black alike. There is, however, a limit to what a country can achieve. This limit is often due to lack of finance, but in Central Africa in recent years physical capacity to execute building and construction work has also been a determining factor. The situation in this respect is now easier but in Northern Rhodesia the availability of contractors and the size of the building industry imposes a severe limit on what can be done.

45. The development programmes for the next four years, therefore, make only limited provision for the extension of social services and in no case approach the level of needs. The Northern Rhodesian European education programme, for instance, only provides for making up the backlog in school places. At present Northern Rhodesia has no secondary schools of its own and has had to accommodate some 1,300 secondary scholars somehow in classes attached to primary schools. Moreover in all three territories although much is being done the demand for educational facilities for Africans is almost limitless. Again the health programme in respect of Southern Rhodesia contemplates an expenditure of just over £2 million on building whereas the Health Department has a list of badly-needed buildings totalling between £4 million and £5 million.

46. The demand for social services is, of course, related to the growth of population and the advancement of the African. The rapid rate of increase in the African population has been mentioned and although for some time Southern Rhodesia has been controlling gross immigration of Europeans down to a level of about 900 a month, the backlog is so large that it is impossible toforesee the time when social services will have generally reached an adequate standard.

THE FINANCING OF THE DEVELOPMENT PROGRAMME.

1, The tables which follow relate proposed total expenditure to financial resources. Financial resources are to be taken to include finance already arranged externally - for example the I.B.R.D. loans to Southern Rhodesia for electricity and to Northern Rhodesia for Rhodesia Railways - and an assessment of what may be financed from local sources.

2. Local finance has been taken to include the provision for development projects made by the Fiscal Commission in its revenue budgets (Appendix I. Report of the Fiscal Commission). The Federal budget, however, was merely prepared from the Federal items in each of the budgets of the three territories and took no account of lack of uniformity in budgetary practice. It has therefore been necessary to assign to the Federal provision for development projects, certain expenditure in the northern territories (e.g. capital expenditure on defence), which is normally met in the financing of their development programmes but in Southern Rhodesia is provided for in the ordinary revenue estimates.

3. Provision is also made for the application ofNorthern Rhodesian surplus balances and for the raising of loans locally. The latter allows for the raising of some loans in addition by the Municipalities of Salisbury and Bulawayo to contribute to the financing of their own programmes.

4. The totals shown against Colonial Development and Welfare grants represent the total of the funds already granted, earmarked or applied for in respect of individual projects by Northern Rhodesia and Nyasaland.

5. The Kafue Scheme has been taken out of the final assessment of funds required as it is anticipated that when the scheme goes ahead it will not be the subject of normal Government finance.

6. The three plans, of course, only cover investment in the public sector, but it is anticipated, particularly with the decline in the net rate of European immigration into Southern Rhodesia, that their execution should not impinge on the availability of physical resources to carry out private investment projects.

FEDERATION OF RHODESIA AND NYASALAND

DEVELOPMENT PLANS
1954-1957

T A B L E I

SUMMARY OF EXPENDITURE AND RESOURCES

	£	£	£
Total Planned Expenditure			
Federal Government	60,994,691	(Hydro £19 m)	
Federal Government (Rhodesia Railways)	23,328,600		
Southern Rhodesia Government	18,844,616		
Northern Rhodesia Government	18,004,271		
Nyasaland Government	3,187,000	124,359,178	
Plus Previous Expenditure to be funded			
Southern Rhodesia	2,137,000		
Northern Rhodesia	4,294,500		
Nyasaland	625,000	7,056,500	131,415,678
Less Resources			
Federal Government	22,060,000		
Federal Government (Rhodesia Railways)	5,330,000		
Southern Rhodesia Government	8,280,000		
Northern Rhodesia Government	13,371,311		
Nyasaland Government	2,228,600	51,269,911	
Special Finance (Kafue)		19,000,000	70,269,911
Balance being Additional Funds Required (for further details see TABLE II)			61,145,767

TABLE II

ADDITIONAL FUNDS REQUIRED BY GOVERNMENT AND PERIOD.

Government	From end of present financial year to 30.6.54	1.7.54-30.6.55	1.7.55-30.6.56	1.7.56-30.6.57	TOTAL	For details See Table No
	£	£	£	£	£	
Federal Government	-	7,638,407	6,157,944	6,138,340	19,934,691	III(a)
Federal Government (Rhodesia Railways)	4,932,300	5,363,600	4,233,400	3,469,300	17,998,600	III(b)
Southern Rhodesia Government	4,454,016	1,076,400	3,929,200	3,242,000	12,701,616	III(c)
Northern Rhodesia Government	650,809	5,084,754	1,924,345	1,267,552	8,927,460	III(d)
Nyasaland	451,800	703,000	190,900	237,700	1,583,400	III(e)
TOTAL	10,488,925	19,866,161	16,435,789	14,354,892	61,145,767	

Note: The figures for Territorial requirements include provision for some Federal works executed before 1.7.54.

TABLE III(a)

EXPENDITURE AND RESOURCES

FEDERAL GOVERNMENT.

	Up to 30.6.54	1.7.54-30.6.55	1.7.55-30.6.56	1.7.56-30.6.57	Total
	£	£	£	£	£
Expenditure					
Loan Account(1)	-	29,792,928	24,302,944	22,679,440	76,775,312
Transferred to Revenue Account (2)	-	544,079	593,400	628,200	1,765,679
Total	-	30,337,007	24,896,344	23,307,640	78,540,991
Less Rhodesia Railways included above	-	9,393,600	4,683,400	3,469,300	17,546,300
Total	-	20,943,407	20,212,944	19,838,340	60,994,691
Resources					
Revenue Appropriation	-	3,000,000	3,000,000	3,000,000	9,000,000
International Bank Electricity Loan	-	1,400,000	-	-	1,400,000
Local Loans	-	3,000,000	3,000,000	3,000,000	9,000,000
Loan Recoveries	-	500,000	550,000	550,000	1,600,000
M.S.A. (N.R. Grant)	-	175,000	175,000	150,000	500,000
C.D.W.	-	30,000	130,000	-	160,000
Stores (N.R., P. and T.)	-	200,000	200,000	-	400,000
Total	-	8,305,000	7,055,000	6,700,000	22,060,000
Balance	-	12,638,407	13,157,944	13,138,340	38,934,691
Less Kafue hydro-electric scheme to be financed separately	-	5,000,000	7,000,000	7,000,000	19,000,000
Total to be raised	-	7,638,407	6,157,944	6,138,340	19,934,691

(1) See Table IV(a)

(2) See Table V.

TABLE III(b)

EXPENDITURE AND RESOURCES

FEDERAL GOVERNMENT (RHODESIA RAILWAYS)

	1.4.54-30.6.54	1.7.54-30.6.55	1.7.55-30.6.56	1.7.56-30.6.57	Total
	£	£	£	£	£
Expenditure					
Brought Forward (1)	3,043,000	-	-	-	3,043,000
Estimated Expenditure	2,739,300	9,393,600	4,683,400	3,469,300	20,285,600
	5,782,300	9,393,600	4,683,400	3,469,300	23,328,600
Resources.					
Pension Contributions	150,000	600,000	450,000	-	1,200,000
Pension Fund Loans	-	3,430,000	-	-	3,430,000
International Bank Loan (balance)	700,000	-	-	-	700,000
	850,000	4,030,000	450,000	-	5,330,000
Balance Required	4,932,300	5,363,600	4,233,400	3,469,300	17,998,600

(1) This has been arrived at as follows:-

Estimated expenditure 1.4.53 - 31.3.54		10,005,900
Less Funds brought forward as at 1.4.53	297,900	
Loan raised in United Kingdom (balance)	1,765,000	
International Bank Loan	4,300,000	
Pension Fund Contributions	600,000	6,962,900
		3,043,000

TABLE III(c)

EXPENDITURE AND RESOURCES

SOUTHERN RHODESIA GOVERNMENT

	1.4.54-30.6.54	1.7.54-30.6.55	1.7.55-30.6.56	1.7.56-30.6.57	Total
	£	£	£	£	£
Expenditure (1)	3,284,016	4,836,400	5,172,200	5,552,000	18,844,616
Resources					
Revenue Appropriation.	-	500,000	500,000	500,000	1,500,000
International Bank Electricity Loan	-	1,550,000	-	-	1,550,000
Local Loans	-	1,000,000	1,000,000	1,000,000	3,000,000
Loan Recoveries	-	400,000	400,000	500,000	1,300,000
Miscellaneous Receipts	-	310,000	310,000	310,000	930,000
	-	3,760,000	2,210,000	2,310,000	8,280,000
Balance	3,284,016	1,076,400	2,962,200	3,242,000	10,564,616
Add for funding existing loans (2)	1,170,000	-	967,000	-	2,137,000
Total to be raised	4,454,016	1,076,400	3,929,200	3,242,000	12,701,616

(1) See Table IV(b).

(2) Expenditure which has been financed by medium term local loans which fall for redemption during the period of the plan. The amount shown is in respect of the amounts which it is considered will be required in cash at the time of redemption.

* Does this compare with Vol II p 21 - IBRD Loan ff 10 -

TABLE III(d)

EXPENDITURE AND RESOURCES

NORTHERN RHODESIA GOVERNMENT

	1.1.54-30.6.54	1.7.54-30.6.55	1.7.55-30.6.56	1.7.56-30.6.57	Total
	£	£	£	£	£
Expenditure (1)	2,922,120	5,890,254	4,924,345	4,267,552	18,004,271
Resources.					
Overne Appro-riation	-	2,000,000	2,000,000	2,000,000	6,000,000
C.D.W., etc.	771,311	100,000	-	-	871,311
Surplus Balance	-	3,000,000	1,000,000	1,000,000	5,000,000
Estimated credit balance N. Rhod-esia Development Account as at 1st Jan. 1954.	1,500,000	-	-	-	1,500,000
Total	2,271,311	5,100,000	3,000,000	3,000,000	13,371,311
Balance	650,809	790,254	1,924,345	1,267,552	4,632,960
Add previous expenditure to be funded (2)	-	4,294,500	-	-	4,294,500
Total to be raised	650,809	5,084,754	1,924,345	1,267,552	8,927,460

(1) See Table IV(c)

(2) Amount required to liquidate an advances account to which capital works have been charged pending the raising of a loan.

Agriculture N.R.

TABLE III(e)

EXPENDITURE AND RESOURCES

NYASALAND GOVERNMENT.

	1.1.54-30.6.54	1.7.54-30.6.55	1.7.55-30.6.56	1.7.56-30.6.57	Total
	£	£	£	£	£
Expenditure (1)	837,500	761,600	798,200	789,700	3,187,000
Resources					
Revenue Appropriation.	225,900	392,300	351,200	345,000	1,314,400
C.D.&.W.	159,800	291,300	256,100	207,000	914,200
Total	385,700	683,600	607,300	552,000	2,228,600
Balance	451,800	78,000	190,900	237,700	958,400
Add previous expenditure to be funded (2)	-	625,000	-	-	625,000
Total to be raised	451,800	703,000	190,900	237,700	1,583,400

(1) See Table IV(d).

(2) Expenditure incurred before 1st January, 1954 which, in expectation of the raising of a loan, has been charged with the authority of the Secretary of State to an Advance Account, which must be liquidated during the period of the plan.

TABLE IV(a)

SUMMARY OF ESTIMATED EXPENDITURE,

FEDERAL GOVERNMENT.

Estimated Capital Expenditure in triennium 1.7.54 - 30.6.57.

Category	1.7.54-30.6.55	1.7.55-30.6.56	1.7.56-30.6.57	Total
	£	£	£	£
Agriculture	1,970,200	1,575,000	1,900,500	5,445,700
Communications and Transport	16,376,251	9,408,801	7,540,600	33,325,652
Major Schemes	5,287,000	7,510,000	7,573,000	20,370,000
Power	2,401,088	2,105,676	2,338,080	6,844,844
Social Services	2,973,389	2,843,767	2,548,160	8,365,316
Miscellaneous	785,000	859,700	779,100	2,423,800
Total	29,792,928	24,302,944	22,679,440	76,775,312

Breakdown of above table.

AGRICULTURE:				
Departmental	122,000	93,000	25,000	240,000
Irrigation	68,000	180,000	675,000	923,000
Cold Storage Comm.	137,000	60,000	13,000	210,000
Dairy Marketing Bd.	10,000	10,000	-	20,000
Grain Marketing Bd.	208,200	17,000	7,500	232,700
Land Bank	1,425,000	1,215,000	1,180,000	3,820,000
COMMUNICATIONS AND TRANSPORT.				
Civil Aviation (incl. C.A.A.)	592,000	527,000	140,000	1,259,000
Posts & Telegraphs	1,135,650	1,045,800	1,110,700	3,292,150
Roads and Bridges	2,534,301	2,361,301	2,340,000	7,235,602
Nyasaland Harbours	30,000	30,000	30,000	90,000
Nyasaland Railways	2,690,700	761,300	450,600	3,902,600
Rhodesia Railways	9,393,600	4,683,400	3,469,300	17,546,300
MAJOR SCHEMES:				
Kafue	5,000,000	7,000,000	7,000,000	19,000,000
Kariba	187,000	298,000	245,000	730,000
Sabi	20,000	60,000	40,000	120,000
Shire	80,000	152,000	288,000	520,000
POWER:				
Electricity	2,401,088	2,105,676	2,338,080	6,844,844
SOCIAL SERVICES:				
Education	1,495,013	1,268,500	1,061,900	3,825,413
Health	1,478,376	1,575,267	1,486,260	4,539,903
MISCELLANEOUS:				
Acquisition of Land	54,000	1,200	6,100	61,300
Other Public Works	531,000	458,000	373,000	1,362,500
Provision for additional Federal Works.	200,000	400,000	400,000	1,000,000

TABLE IV(b)

SUMMARY OF ESTIMATED EXPENDITURE.

SOUTHERN RHODESIA GOVERNMENT.

	£
Estimated Expenditure in period 1.4.54 - 30.6.54	3,284,016
Estimated Expenditure in triennium 1.7.54 - 30.6.57.	

	1.7.54-30.6.55	1.7.55-30.6.56	1.7.56-30.6.57	
	£	£	£	
Internal Affairs - Head:-				
Site Acquisition	11,900	7,800	5,000	24,700
Native Affairs:-				
Schools	150,000	175,000	200,000	525,000
Townships and Village Settlements	126,000	140,900	125,900	392,800
Miscellaneous	50,600	50,600	51,100	152,300
Roads	400,000	750,000	1,000,000	2,150,000
Lands	55,000	57,000	115,000	227,000
Water and Irrigation	400,000	306,000	300,000	1,006,000
Public Works	327,000	400,000	500,000	1,227,000
Norton Township Dev.	51,000	60,000	50,000	161,000
Cotton Research and Industry Board	54,900	54,900	-	109,800
Forestry Commission	210,000	170,000	205,000	585,000
Local Authorities	3,000,000	3,000,000	3,000,000	9,000,000
Total	4,836,400	5,172,200	5,552,000	15,560,600

Total Estimated Expenditure 1.4.54 - 30.6.57	18,844,616

Doesn't exactly agree with Vol II page 11

TABLE IV(c)

SUMMARY OF ESTIMATED EXPENDITURE,

NORTHERN RHODESIA GOVERNMENT.

	£
Estimated Expenditure in period 1.1.54 - 30.6.54.	2,922,120
Estimated expenditure in triennium 1.7.54 - 30.6.57.	

	1.7.54-30.6.55	1.7.55-30.6.56	1.7.56-30.6.57	
	£	£	£	
Health	8,027	10,000	10,000	28,027
African Education	252,885	219,656	186,924	659,465
Agriculture	109,000	69,000	30,000	208,000
Forestry	67,165	42,675	34,025	143,865
Veterinary	37,680	36,500	33,400	107,580
Water Dev. & Irrigation	150,000	150,000	115,000	415,000
Game and Tsetse	40,850	38,250	35,403	114,503
Rural Development	191,059	135,500	112,500	439,059
Tourist Development	6,922	5,350	300	12,572
Electricity and Water	795,000	575,000	474,000	1,844,000
Public Works	304,770	160,215	100,000	564,985
African Housing	850,000	850,000	850,000	2,550,000
European Housing	703,246	256,000	100,000	1,059,246
Roads	274,500	284,500	241,000	800,000
Bridges	3,199	3,199	-	6,398
Local Authorities	2,000,000	2,000,000	1,900,000	5,900,000
Co-operatives	20,000	20,000	20,000	60,000
Miscellaneous	75,951	68,500	25,000	169,451
Total:	5,890,254	4,924,345	4,267,552	15,082,151

Total estimated expenditure 1.1.54 - 30.6.57	£18,004,271

TABLE IV(d)

SUMMARY OF ESTIMATED EXPENDITURE

NYASALAND GOVERNMENT.

	£
Estimated Expenditure in period 1.1.54 - 30.6.54.	837,500
Estimated Expenditure in triennium 1.7.54 - 30.6.57.	

	1.7.54 to 30.6.55	1.7.55 to 30.6.56	1.7.56 to 30.6.57	
	£	£	£	
Agriculture and Veterinary	97,200	81,800	93,800	272,800
Forestry	65,000	122,900	149,700	337,600
Water Supplies	62,500	20,300	20,100	102,900
Game Fish	6,100	13,800	9,900	29,800
Roads	100,000	100,000	100,000	300,000
African Education	106,000	97,400	60,200	263,600
Staff Housing	180,000	180,000	180,000	540,000
Government Buildings	94,800	82,000	76,000	252,800
Loans to Municipalities	50,000	100,000	100,000	250,000
TOTAL:	761,600	798,200	789,700	2,349,500
Total Estimated expenditure 1.1.54 - 30.6.57				£3,187,000

TABLE V.

ITEMS IN THE NORTHERN RHODESIA AND NYASALAND PLANS WHICH IT IS NOW PROPOSED TO CHARGE TO FEDERAL REVENUE

NORTHERN RHODESIA.

	1.7.54-30.6.55	1.7.55-30.6.56	1.7.56-30.6.57	Total
	£	£	£	£
Health	5,393	-	-	5,393
Civil Aviation	2,178	1,500	1,600	5,278
Military	100,000	150,000	250,000	500,000
Geological	30,000	30,000	10,000	70,000
Econ. Survey	10,408	-	-	10,408
	147,979	181,500	261,600	591,079

NYASALAND.

	1.7.54-30.6.55	1.7.55-30.6.56	1.7.56-30.6.57	Total
	£	£	£	£
Hydrological Survey	19,000	19,000	19,000	57,000
Geological Survey	25,800	26,700	15,000	67,500
Civil Aviation	-	12,000	12,000	24,000
Posts & Telegraphs	53,200	34,400	28,900	116,500
European Education	54,600	74,700	58,400	187,700
Public Health	88,700	68,800	69,800	227,300
Admin. Services	30,300	26,300	13,500	70,100
Military	124,500	150,000	150,000	424,500
	396,100	411,900	366,600	1,174,600
Grand Total	544,079	593,400	628,200	1,765,679

SOUTHERN RHODESIA

DEVELOPMENT PLAN

1954 - 1957

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SOUTHERN RHODESIA DEVELOPMENT PLANS FOR THE PERIOD 1ST APRIL 1954 TO 30TH JUNE 1957

The funds estimated to be necessary to implement the development plans are summarised below:-

	April-June 1954	1954-5	1955-6	1956-7	Total
	£	£	£	£	£
Part I. Govt. Depts.	1,254,800	5,652,500	5,746,500	6,538,100	19,191,900
Part II. Statutory Boards	1,029,216	4,696,188	4,091,576	3,964,580	13,781,560
Part III. Local Authorities	1,000,000	3,000,000	3,000,000	3,000,000	10,000,000
	£3,284,016	13,348,688	12,838,076	13,502,680	42,973,460

An estimated allocation of these amounts between Federal and Territorial Governments is as follows:-

	April-June 1954		1954-55		1955-56	
	Fed.	Terr.	Fed.	Terr.	Fed.	Terr.
	£	£	£	£	£	£
Part I. Govt Depts.	-	1,254,800	4,081,000	1,571,500	3,799,200	1,947,300
Part II. Statutory Boards	-	1,029,216	4,431,288	264,900	3,866,676	224,900
Part III. Local Authorities	-	1,000,000	-	3,000,000	-	3,000,000
£	-	3,284,016	8,512,288	4,836,400	7,665,876	5,172,200

	1956-57		Total		Grand Total
	Fed.	Terr.	Fed.	Terr.	
	£	£	£	£	£
Part I. Govt. Depts.	4,191,100	2,347,000	12,071,300	7,120,600	19,191,900
Part II. Statutory Boards	3,759,580	205,000	12,057,544	1,724,016	13,781,560
Part III. Local Authorities	-	3,000,000	-	10,000,000	10,000,000
£	7,950,680	5,552,000	24,128,844	18,844,616	42,973,460

PART I - GOVERNMENT DEPARTMENTS

The funds requested by Government Departments and the allotments made are set out in the following table. Explanatory notes regarding the allotments are given immediately after the table.

Department	1954										Total
	Fed. £	Terr. £	Fed. £	Terr. £	Fed. £	Terr. £	Fed. £	Terr. £	Fed. £	Terr. £	£
State Printing Works -											
Requested	-	-	5,000	-	15,000	-	5,000	-	25,000	-	25,000
Allotted	-	-	-	-	-	-	-	-	-	-	-
Posts & Telegraphs											
Requested		236,600	889,800	-	771,500	-	932,750	-	2,594,050	236,600	2,830,650
Allotted		200,000	775,000	-	705,000	-	825,000	-	2,305,000	200,000	2,505,000
Internal Affairs, & Education -											
Requested		17,200	67,000	11,900	11,200	7,800	12,100	5,000	90,300	41,900	132,200
Allotted		14,200	14,000	11,900	11,200	7,800	11,100	5,000	36,300	38,900	75,200
Native Affairs -											
Requested		133,600	60,000	460,600	60,000	443,500	60,000	310,000	180,000	1,347,700	1,527,700
Allotted		93,600	60,000	326,600	60,000	366,500	60,000	377,000	180,000	1,163,700	1,343,700
Civil Aviation -											
Requested		84,800	760,800	-	508,800	-	312,000	-	1,581,600	84,800	1,666,400
Allotted		50,000	322,000	-	140,000	-	-	-	462,000	50,000	512,000
Roads -											
Requested		300,000	1,100,000	400,000	1,050,000	750,000	1,150,000	1,000,000	3,300,000	2,450,000	5,750,000
Allotted		300,000	1,100,000	400,000	1,050,000	750,000	1,150,000	1,000,000	3,300,000	2,450,000	5,750,000
Agriculture -											
Requested		17,500	172,000	-	168,000	-	125,000	-	465,000	17,500	482,500
Allotted		5,000	122,000	-	93,000	-	25,000	-	240,000	5,000	245,000
Lands -											
Requested		58,700	53,700	55,000	-	57,000	5,000	190,000	58,700	360,700	419,400
Allotted		30,000	50,000	55,000	-	57,000	5,000	115,000	55,000	257,000	312,000
Irrigation -											
Requested		109,000	136,000	505,000	320,000	451,000	850,000	300,000	1,306,000	1,365,000	2,671,000
Allotted		97,000	68,000	400,000	180,000	306,000	675,000	300,000	923,000	1,103,000	2,026,000
Public Works -											
Requested	25,000	502,000	1,725,000	375,000	1,640,000	460,000	1,574,000	526,000	4,964,000	1,863,000	6,827,000
Allotted	-	450,000	1,550,000	327,000	1,500,000	400,000	1,400,000	500,000	4,450,000	1,677,000	6,127,000
Sub-Totals -											
Requested	25,000	1,459,400	4,969,300	1,807,500	4,544,500	2,169,300	5,025,850	2,331,000	14,564,650	7,767,200	22,331,850
Allotted	-	1,239,800	4,061,000	1,520,500	3,739,200	1,887,300	4,151,100	2,297,000	11,951,300	6,944,600	18,895,900

(Continued next page)

Department	April-June 1954		1954 - 55		1955 - 56		1956 - 57		Total		Grand Total
	Fed. £	Terr. £	Fed. £	Terr. £	Fed. £	Terr. £	Fed. £	Terr. £	Fed. £	Terr. £	
Norton Development											
Requested	-	15,000	-	51,000	-	0,000	-	50,000	-	176,000	176,000
Allotted	-	15,000	-	51,000	-	60,000	-	50,000	-	176,000	176,000
Sabi Valley Project -											
Requested	-	-	20,000	-	60,000	-	40,000	-	120,000	-	120,000
Allotted	-	-	20,000	-	60,000	-	40,000	-	120,000	-	120,000
Totals -											
Requested	25,000	1,474,400	4,989,300	1,858,500	4,604,500	2,229,300	5,065,850	2,381,000	14,684,650	7,943,200	22,627,850
Allotted	-	1,254,800	4,081,000	1,571,500	3,799,200	1,947,300	4,191,100	2,347,000	12,071,300	7,120,600	19,191,900

Posts and Telegraphs - £2,505,000 (Terr. £200,000; Fed. £2,305,000).

As a result of the expansion in the country in the post war years, there is a substantial backlog in the demand for postal and telegraphic services and particularly so as regards the provision of telephones.

The backlog is estimated at £1,000,000 and the telephone subscribers waiting list is 6,650.

The Department aims at the following target:-

1954 - 5: 4,400 new exchange lines,
72 additional trunk telephone channels and 6 additional telegraph channels

1955 - 6: 4,700 new exchange lines including two new exchanges at Gatooma and Marandellas and 35 additional trunk telephone channels

1956 - 7: 5,900 new exchange lines including two new exchanges, one in the Salisbury industrial sites area and one at Sinoia, and 28 additional trunk telephone channels.

In addition, work is to be done in improving broadcasting services, mainly transmitting, but the amount involved is comparatively minor totalling less than £100,000.

This development is aimed at clearing the backlog by 1958.

The funds provisionally allotted for this service cover the purchase of equipment only. Labour and installation costs are not included as these are charged to Revenue Account.

It will be noted that the funds estimated to be necessary by the Department for this programme have been reduced by approximately £326,000. This has been done on the grounds that delays in obtaining equipment, staff, accommodation and transport will affect the rate of implementing the programme.

Internal Affairs and Education - £75,200 (Terr. £38,900; Fed. £36,300).

This allotment can conveniently be sub-divided as follows:-

	April-June 1954 £	1954-5 £	1955-6 £	1956-7 £	Total £
Education:					
Vocational Training Loans		10,000	10,000	10,000	30,000
Acquisition of Urban Sites	11,200	7,200	5,000	3,100	26,500
Industrial Sites:					
Town Management Board Areas:					
Railway Sidings	3,000	8,700	4,000	3,000	18,700
	£14,200	£25,900	£19,000	£16,100	£75,200

A division between Federal and Territorial Governments is as follows:-

	Federal	Territorial	Total
April-June 1954	-	14,200	14,200
1954-5	14,000	11,900	25,900
1955-6	11,200	7,800	19,000
1956-7	11,100	5,000	16,100
TOTAL:	£36,300	£38,900	£75,200

Education : Vocational Training Loans: There is a fund, administered by the Education Department, which makes loans to students for higher education. The loans are interest bearing and repayable from two to five years after the student has completed his studies. The funds set down are for an increase in the fund's capital which at present stands at £69,300.

Acquisition of Urban Sites : The details are :-

	April-June 1954	1954-5	1955-6	1956-7	Total
Customs & Excise Purposes (Beira)	10,000				10,000
European Education Purposes		3,500	-	900	4,400
Native Education Purposes	1,200	-	1,800	-	3,000
Posts & Telegraphs		500	1,200	200	1,900
Roads Purposes		2,000	2,000	2,000	6,000
General		1,200	-	-	1,200
	£11,200	£7,200	£5,000	£3,100	£26,500

Industrial Sites : Town Management Board Areas : Railway Sidings: Where Government puts in a railway siding in an industrial area, the costs are recoverable in the selling price of the stands. The details for which the funds under this head are required are as follows:-

April-June 1954	: Marandellas area	£3,000
1954-5	: Ft. Victoria area	8,700
1955-6	: Sinoia area	4,000
1956-7	: Gwanda area	3,000
		£18,700

In these areas, industrial sites have been sold on the understanding that railway sidings would be constructed.

Native Affairs £1,343,700 (Terr. £1,163,700; Fed. £180,000).

The funds are required as follows:-

	April-June 1954	1954-5	1955-6	1956-7	Total
Buildings - Administrative & Residential	8,000	37,000	37,000	37,500	119,500
Clinics	16,500	60,000	60,000	60,000	196,500
Schools	30,000	150,000	175,000	200,000	555,000
Purchase of Land	7,000	1,000	1,000	1,000	10,000
Native Townships	11,000	44,000	48,900	43,900	147,800
Native Village Settlements	19,000	82,000	92,000	82,000	275,000
Loans to Missions	-	5,000	5,000	5,000	15,000
Housing Loans	2,000	7,500	7,500	7,500	24,500
Farming Loans	100	100	100	100	400
	93,600	386,600	426,500	437,000	1,343,700

Of the above, the item "Clinics" will form a charge against the funds of the Federal Government.

The building programme will be carried out in the Native Areas by the Department of Native Engineering using African labour under European supervision.

It is not possible to state precise works which will be undertaken.

The building of administrative and residential works and clinics is a continuing process and priorities are assessed in the light of availability of funds and existing circumstances. It is pointed out that as natives are moved to new areas under the Land Apportionment Act so the need for clinics and other buildings arise. Considerable importance is attached to water and soil conservation and good farming methods. Residential buildings are mainly for officials stationed in Native Areas to supervise, advise and demonstrate in these matters. Administrative buildings include Police Stations and other Government offices required.

Regarding schools, the position is a little different. Following on the recommendations of the Kerr Commission Report on Native Education, the policy is to accelerate the provision of suitable school buildings. There are at present 15 Government schools with another 9 under construction and the enrolment is approximately 10,000. The aim is to provide an additional 30 schools within the period of the Plan to handle an increase in enrolment up to an anticipated 30,000 pupils. The funds estimated to be necessary for this purpose by the Department have been reduced by £84,000 to keep the provision in step with construction capacity.

The provision for "Purchase of Land" is required because by law the Department must take up land in what is known as the Native Purchase Area which is held by Europeans. Such land is acquired as and when the present holder ceases occupation. The provision of £7,000 in the April-June 1954 period is in respect of two properties which it is known will be on the market. The balance of the provision (£3,000) is for contingencies which may arise.

The provision for "Native Townships" is mainly for the two native townships of Seki and Ntabazunduna and is for communal and administrative buildings, road construction, water reticulation, street lighting and similar services. In these townships the African is encouraged to obtain title to stands and to erect his own accommodation. Demonstration cottages have been erected by the Department for the benefit of would-be builders. Provision is also included under this head for the development of similar townships at Mt. Hampden, St. Mary's (Salisbury), Concession, Eiffel Flats and Beitbridge.

Under "Native Village Settlements" the provision is for normal expansion and covers the construction of approximately 140 additional cottages per year. These Settlements are in close proximity to the main centres of the country and the demand for more adequate native housing is urgent and heavy. Provision is included for "Loans to Missions." These loans are interest bearing and are for building purposes.

"Housing Loans" are for giving assistance to Africans who wish to build their own houses in Native Townships. The loan may be in the form of building materials.

"Farming Loans" are for settlers under the African Ex-Servicemens Land Settlement Scheme. The demands are very light and the provision is normal.

Civil Aviation - £512,000 (Terr. £50,000; Fed. £462,000).

This covers the following items:-

	April-June 1954	1954-5	1955-6	Total
Salisbury-New Airfield	50,000	300,000	120,000	470,000
Umtali-Grand Reef Airfield	-	22,000	20,000	42,000
	£50,000	£322,000	£140,000	£512,000

Salisbury-New Airfield- At present the civil airport in Salisbury is at Belvedere which is owned by the Municipality. This airport is very close to the built up area and the erection of multi-storey buildings in the City constitutes a very real hazard to aviation. The Municipality is also pressing for its resumption of the land for other purposes.

A "joint user" airfield has been built at Kentucky which is approximately twelve miles from the centre of Salisbury. At present this field is used by the Southern Rhodesia Air Force and funds are required for the construction of taxi-tracks and for the provision of a hard standing area. The estimated cost of these works is £250,000. In addition, a terminal building and transmitting station for civil aviation requirements are necessary. The estimate of cost for these is £212,000. The balance of £8,000 is for water supply and reticulation.

Umtali-Grand Reef - The provision is for completion of the airfield to dry weather standard. £40,000 is required for completion of the runway and the balance of £2,000 for buildings.

Roads - £5,750,000 (Terr. £2,450,000; Fed. £3,300,000).

The need for an adequate road system needs no emphasising. The amount of work requiring to be done is enormous and urgent and will take many years to complete. The position has been aggravated by the break up of the old strip roads under a weight and volume of traffic they were never designed to withstand. The provision is related to construction capacity.

Agriculture - £245,000 (Terr. £5,000; Fed. £240,000).

Details are:

	April-June 1954	1954-5	1955-6	1956-7	Total
Large Scale High Veld Irrigation Scheme-					
Research Station		25,000	22,000		47,000
Development Farm		8,000	4,000		12,000
Large Scale Low Veld Irrigation Scheme -					
Development Farm		9,000	4,000		13,000
Training (Quarters)		25,000	18,000		43,000
Midlands Research Station		30,000	20,000		50,000
Loans to I.C.A. Committees	5,000	25,000	25,000	25,000	80,000
	5,000	122,000	93,000	25,000	245,000

Large Scale High Veld Irrigation Scheme - This project has been recommended by the Standing Committee on Large Scale Irrigation Projects. Its primary object is increased food production. As very little is known about irrigation farming on the high veld a Research Station and a Development Farm are considered essential. The provision covers clearing, construction of irrigation canals, erection of buildings, purchase of equipment etc. Water will be obtained from Lake Mollwaine. The land is estimated to cost £50,000 and has been included in the provision for "Lands."

Large Scale High Veld Irrigation Scheme - This project is similar to the Large Scale High Veld Irrigation Scheme. The Development Farm will be in the Sabi area where there is already a Research Station under a noted American agronomist - Dr. Converse. No land purchase is involved and the provision is for clearing, canals, buildings and equipment.

Under this head provision is included for "Training (Quarters)." It is proposed that would-be irrigation farmers should undertake a course of training before being allotted land. The funds are required for housing for trainees and training staff. It is estimated that the provision will cover the erection of 12 houses.

Midlands Research Station - This station is required because conditions in the area are such that agricultural problems there cannot be investigated on any other existing Research Station. Again, the primary object is increased food production. The provision is for the following purposes:-

Land	£12,000
Staff Quarters (6)	24,000
Development (buildings, equipment, fencing etc.)	14,000
	£50,000

Loans to I.C.A. Committees: There are at present 85 such Committees. The loans are for the purchase of earth-moving equipment for water and soil conservation purposes. The loans are interest bearing and are repaid over the estimated life of the equipment purchased. Government supplies an advisory and supervisory service regarding conservation work and the proper use and maintenance of this equipment. Outstanding loans to these Committees at 31st March, 1953 stood at £240,622 and 60 Committees have purchased their own equipment.

Lands - £312,000 (Terr. £257,000; Fed. £55,000).

Details are:-

	April-June 1954	1954-5	1955-6	1956-7	Total
Loans to Settlers under Soldier Settlement Schemes	10,000	55,000	42,000	25,000	132,000
Purchase of Land	20,000	50,000	15,000	95,000	180,000
	30,000	105,000	57,000	120,000	312,000

The allocation between Federal and Territorial funds is as follows:-

	Federal	Territorial	Total
April-June 1954	-	30,000	30,000
1954-5	50,000	55,000	105,000
1955-6		57,000	57,000
1956-7	95,000	25,000	120,000
	£145,000	£167,000	£312,000

Loans to Settlers under Soldier Settlement Schemes - The provision covers three Schemes - (1) Ex-Servicemen (European) 1939-45 War (2) Ex-Servicemen (Coloured) 1939-45 War and (3) Ex-Servicemen from the Far East Volunteer Unit. There is a Charter for each Scheme which has been approved by Parliament. Briefly, these Charters provide for training, allotment of land, granting of loans and granting of title. Long term loans vary from £1,500 for non-food producers to £4,000 for ranchers. Short-term seasonal loans may be made but at no time may the maximum total indebtedness exceed £5,000. Title may be granted after a minimum period of 5 years subject to satisfactory reports by the Land Settlement Board and liquidation of indebtedness to Government. Loans are interest bearing and repayable over 20 years. There are at present 451 settlers under the Schemes.

Purchase of Land : The provision covers the following items:-

April-June 1954: £20,000 for the purchase of land at Marandellas for development of industries. This will be resold as industrial sites.

1954-5 : £50,000 for the purchase of land for the Large Scale High Veld Irrigation Project Research Station.

1955-6 : £15,000 for the purchase of land at Bannockburn. This will be resold as industrial sites. The Pafuri rail link will come in at this point.

1956-7 : £5,000 for the purchase of land in Bulawayo for a Radio site. £90,000 for the purchase of land below Lake McIlwaine for cutting up and re-sale as irrigation holdings. Water will be sold from Lake McIlwaine in which the Southern Rhodesia Government has invested approximately £700,000.

Irrigation £2,026,000 (Terr. £1,103,000; Fed. £923,000)

Details are:-

	April-June 1954	1954-5	1955-6	1956-7	Total
Hunyani Irrigation Scheme	-	50,000	130,000	175,000	355,000
Dutchmans Pool Dam	2,000	-	-	-	2,000
Sebakwe Dam	75,000	300,000	106,000	10,000	491,000
Sebakwe Canal	20,000	100,000	100,000	50,000	270,000
Kyle or Bangala Dam	-	-	-	250,000	250,000
Esquilingwe Weir (Triangle)	-	18,000	-	-	18,000
Sugar Estates Canal			50,000	250,000	300,000
Lundi Dam			100,000	240,000	340,000
	£97,000	£468,000	£486,000	£975,000	£2,026,000

Expenditure on Dutchmans Pool Dam, Sebakwe Dam, Sebakwe Canal and the Lundi Dam has been put down as Territorial and the remaining items have been allocated as Federal. The allocation between Federal and Territorial funds is therefore as follows:-

	Federal	Territorial	Total
April-June 1954	-	97,000	97,000
1954-5	68,000	400,000	468,000
1955-6	180,000	306,000	486,000
1956-7	675,000	300,000	975,000
	£923,000	£1,103,000	£2,026,000

Hunyani Irrigation Scheme - The total estimated cost of this scheme is £765,000. The carry over beyond 1956-57 is therefore £410,000.

This project is the construction of a reservoir to which water will be pumped from Lake McIlwaine and then led by pipes and canals to the irrigation holdings and Research Station below the lake. Water will also be taken off and supplied to Norton Township. The provision is for the construction of the reservoir, piping, canals and pumping plant.

Dutchmans Pool Dam - The total estimated cost is £130,000 and it will be completed in 1954. This dam is really a subsidiary to the Sebakwe Dam to which it will be linked by a canal. Water will be sold at the dam to the Electricity Supply Commission which will canal it to its Power Station at Umniati.

Sebakwe Dam - The total estimated cost is £600,000. As at 31st March, 1954 estimated expenditure will be £109,000. There will be no carry over beyond 1956-7. This dam, together with the Dutchmans Pool Dam will supply the water requirements of Que Que and the Electricity Supply Commission's station at Umniati and will enable the Steel Works to take over the dam at present supplying Que Que.

Sebakwe Canal - The total estimated cost is £270,000 and it will be completed in 1956-7. This canal connects the Sebakwe and Dutchmans Pool dams.

Esquilingwe Weir - The provision is for the purchase of the old weir (£8,000) which Government has already raised by 12 feet and to raise it yet another 3 to 4 feet (£10,000). This is to ensure an adequate supply of water in a season of poor rainfall to irrigate 1,500 acres of sugar cane at the Triangle Sugar Estates.

Kyle or Bangala Dam - The choice of sites has not yet been finalised. The total estimated cost is £900,000 and the carry over beyond 1956-57 is therefore £650,000.

This dam is a key one in the development of the Sabi Valley. This project has been investigated and reported on by Sir Alexander Gibb and Partners. Its purpose is to ensure a supply of water for irrigation holdings and will also enable a further 15,000 acres to be put under sugar cane and increase production to 40,000 tons per annum.

Sugar Estates Canal - The total estimated cost is £920,000. The carry over beyond 1956-7 is therefore £620,000. Its construction is timed for completion with the Kyle or Bangala dam and is part of that scheme.

Lundi Dam - The total estimated cost is £600,000. The carry over beyond 1956-7 is therefore £260,000. This dam is required to fulfill the water requirements of Gwelo, Shabani and Selukwe.

A summary of the carry over commitments beyond 1956-7 on irrigation works is as follows:-

Hunyani Irrigation Scheme	£410,000
Kyle or Bangala Dam	650,000
Sugar Estates Canal	620,000
Lundi Dam	260,000
	£1,940,000

Public Works £6,127,000 (Terr. £1,677,000 Fed. £4,450,000).

This Department is responsible for all building construction and maintenance in the European area.

The rapid development of the country in the post war years has created a great demand for buildings particularly schools, hospitals and postal and telegraphic services. The provision of buildings has been governed by availability of funds and building potential, and each year the buildings to be constructed are decided on a priority basis within these limits. It is not possible to finance in a short period all that requires to be done and accordingly, a sum of money has been allotted for building purposes. The actual works which will be constructed will be determined from time to time on a priority basis as mentioned above. The provision of £6,127,000 for the period ending 30th June 1957 will only go a small way to meeting requirements.

The provisional allocation of this sum is as follows:-

	April-June 1954	1954-5	1955-6	1956-7	Total
Education	140,000	500,000	500,000	500,000	1,640,000
Health	160,000	700,000	700,000	700,000	2,260,000
Posts and Telegraphs	50,000	200,000	200,000	200,000	650,000
Sub-Total:	350,000	1,400,000	1,400,000	1,400,000	4,550,000
Other Purposes	100,000	477,000	500,000	500,000	1,577,000
Total:	£450,000	1,877,000	1,900,000	1,900,000	6,127,000

Included in "Other Purposes" is the sum of £100,000 in each of the years 1954-5, 1955-6 and 1956-7 for buildings which may be required by the Federal Government.

A broad allocation of the total provision between Federal and Territorial funds is as follows:-

	Federal	Territorial	Total
April-June 1954	-	450,000	450,000
1954-5	1,500,000	377,000	1,877,000
1955-6	1,500,000	400,000	1,900,000
1956-7	1,500,000	400,000	1,900,000
	£4,500,000	£1,627,000	£6,127,000

Norton Development £176,000(Terr.).

This project is the development of an industrial township at Norton over the next 12-15 years to accommodate 8,500 Europeans and 25,000 Africans. The land required was purchased two years ago at a cost of £57,000.

By the end of 1956 the aim is to have developed to a stage where 1,000 Europeans and 5,000 Africans can be accommodated. The next stage, commencing in 1956-7 will be expansion to 2,000 Europeans and 7,500 Africans.

Income for the period ending 30th June 1956 is estimated at £81,000 from land sales and £9,000 from other sources and this will accrue to the S. Rhodesia Consolidated Revenue Fund until a local authority is established to take over the assets and liabilities and administer the township.

The provision covers cost of installation of essential services as follows:-

	April-June 1954	1954-5	1955-6	1956-7	Total
Water Reticulation	2,000	5,000	20,000	12,500	39,500
Sewerage	3,000	5,000	10,000	12,500	30,500
Roads	3,000	5,000	10,000	12,500	30,500
African Township Services (Sewerage etc.)	7,000	36,000	20,000	12,500	75,500
	£15,000	£51,000	£60,000	£50,000	£176,000

To date, two companies have set up in the area and enquiries from 19 others have been received.

Water will be obtained from Lake McIlwaine and this matter has been referred to under the Irrigation Notes - Hunyani Irrigation Scheme.

Sabi Valley Project £120,000 (Fed.)

The Project is concerned with the economic development of the Sabi/Lundi Valleys which have an area of 32,370 square miles. There are about 500,000 acres of irrigable land in the lower Sabi Valley but it is anticipated that water will only be available for 240,000 acres. Produce will be lucerne, milk, beef, wheat, maize and groundnuts. There is also a potential of 40,000 tons of sugar per year from the expansion of the Triangle Sugar Estates which would be made possible.

There are also valuable mineral deposits - principally coal, iron, limestone, apatite copper and tungsten. Regarding coal, the largest seam is about 40 ft. thick and probable reserves are estimated at at least 2,000 million tons. One estimate of iron ore is 14 million tons of high grade ore and 39 million tons of low grade ore.

Naturally, a pilot project is necessary to prove potentialities before main development is undertaken. Sir Alexander Gibb and Partners recommended a project of 20,000 acres. As in drought years insufficient water would be available for this area without the construction of storage dams, a smaller project of 1,600 acres is contemplated. 16 farm units of 100 irrigable acres would be prepared, eight of which are provided for in the 1954-57 period. The total cost of the smaller project is set at £400,000 of which £120,000 will be required in the 1954-57 period as follows:-

1954 - 55	£20,000	- for roads
1955 - 56	£60,000	- for roads and preparation of 4 farms
1956 - 57	£40,000	- for preparation of 4 farms

The preparation of farms has been set at £10,000 each made up as follows:-

Clearing	£2,400
Field furrows & terraces	2,000
Permanent Improvements (Housing, farm buildings etc.)	4,500
Sundries	1,100
	£10,000

There is already an experimental station under Dr. Converse and provision has been made under "Agriculture" for a Low Veld Irrigation Research Station. It is also the intention to send men to America to study irrigation farming and to give special training in the Colony to selected settlers on irrigation holdings.

Part II : Statutory Commissions and Boards

The funds requested by Statutory Commissions and Boards and the allotments made are set out in the following table. Explanatory notes are given immediately after the table.

	Terr. £	Fed. £	Terr. £	Fed. £	Terr. £	Fed. £	Terr. £	Total Fed. £	Total Terr. £	Total £
Central African Airways-										
Requested	-	350,000	-	1,180,000	-	-	-	1,530,000	-	1,530,000
Allotted	-	100,000	-	180,000	-	-	-	280,000	-	280,000
Cold Storage Commission of S. Rhodesia										
Requested	146,500	172,500	-	60,000	-	73,000	-	305,500	146,500	452,000
Allotted	62,500	137,000	-	60,000	-	13,000	-	210,000	62,500	272,500
Cotton Research & Industry Board -										
Requested	90,000	-	494,900	-	437,900	-	285,500	-	1,308,300	1,308,300
Allotted	-	-	54,900	-	54,900	-	-	-	109,800	109,800
Dairy Marketing Board -										
Requested	101,000	37,500	-	315,000	-	205,000	-	557,500	101,000	658,500
Allotted	95,000	10,000	-	10,000	-	-	-	20,000	95,000	115,000
Electricity Supply Commission -										
Requested	691,016	2,364,088	-	2,186,676	-	2,414,080	-	6,964,844	691,016	7,655,860
Allotted	691,016	2,364,088	-	2,086,676	-	2,314,080	-	6,764,844	691,016	7,455,860
Land & Agricultural Bank of S. Rhodesia -										
Requested	75,000	1,425,000	-	1,415,000	-	1,480,000	-	4,320,000	75,000	4,395,000
Allotted	75,000	1,425,000	-	1,215,000	-	1,180,000	-	3,820,000	75,000	3,895,000
Grain Marketing Board -										
Requested	73,200	245,700	-	17,000	-	7,500	-	270,200	73,200	343,400
Allotted	60,700	208,200	-	17,000	-	7,500	-	232,700	60,700	293,400
Forestry Commission -										
Requested	45,000	-	210,000	-	170,000	-	205,000	-	630,000	630,000
Allotted	45,000	-	210,000	-	170,000	-	205,000	-	630,000	630,000
Sub-Totals -										
Requested	1,221,716	4,594,788	704,900	5,173,676	607,900	4,179,580	490,500	13,948,044	3,025,016	16,973,060
Allotted	1,029,216	4,244,288	264,900	3,568,676	224,900	3,514,580	205,000	11,327,544	1,724,016	13,051,560
Kariba Gorge										
Requested	-	187,000	-	348,000	-	395,000	-	930,000	-	930,000
Allotted	-	187,000	-	298,000	-	245,000	-	730,000	-	730,000
Totals -										
Requested	1,221,716	4,781,788	704,900	5,521,676	607,900	4,574,580	490,500	14,878,044	3,025,016	17,903,060
Allotted	1,029,216	4,431,288	264,900	3,866,676	224,900	3,759,580	205,000	12,057,544	1,724,016	13,781,560

Central African Airways £280,000(Fed.)

This Organisation is based on Belvedere Airport. As explained under the heading "Civil Aviation" in Part I - Government Departments, it will be necessary for civil aviation to move to the new airport at Kentucky. The funds are for an increase in the Airways Capital to set up an operations base at Kentucky comprising administrative buildings, passenger and cargo handling buildings, erection of hangars, workshops etc.

As at 31st March, 1953, Airways capital stood at £880,000.

Re-equipment of the aircraft fleet will have to be undertaken some time in the next few years. Pending the Report of consultants who are to be appointed to investigate and recommend on the air services for Central Africa, no provision for this re-equipment has been included.

Cold Storage Commission of Southern Rhodesia £272,500 (Terr. £62,500;Fed. £210,000).

Details are as follows:-

	April-June 1954	1954-5	1955-6	1956-7	Total
Umtali- First Ex.	-	31,000	-	-	31,000
Grazing Development	30,000	75,000	20,000	-	125,000
Land Purchases -					
Dora Ranch		31,000	40,000	40,000	111,000
Taylors Block	4,000	-	-	-	4,000
Shiloh Farm	28,500	-	-	-	28,500
Exchange Block	-	-	-	33,000	33,000
	62,500	137,000	60,000	73,000	332,500
less Land Sales					60,000
			Net Provision		£272,500

Umtali - First Extension This work is in progress and the money is required for completion. It consists of the construction of two cold rooms and a by-products plant. The total cost is £35,000 of which £4,000 has been spent or provided.

Grazing Development - This is a most important part of the Commission's policy. It consits of paddocking, construction of dip tanks, and provision of water. The object is to improve the condition of native stock and to decrease the mortality rate. The provision covers development of the land to be purchased in the period ending 30th June, 1957.

Land Purchases - This ties in closely with the policy of grazing development. With adequate grazing grounds, beef can be held on the hoof and expenditure on cold room construction decreased. The quality of the meat is also improved.

Portions of Dora Ranch and Exchange Block will be sold and proceeds are set at £60,000.

The capital of the Commission at 31st March, 1953 stood at £1,969,989. It is proposed that funds for non-productive works should be provided from Revenue and during this period such amounts are estimated at £100,000.

Cotton Research and Industry Board - £109,800 (Terr.).

This provision is for a new Research Station and for another cotton wool factory. The expenditure is anticipated to be incurred as follows:-

	1954 - 5	1955 - 6	Total
Research Station	26,300	26,300	52,600
Cotton Wool Factory	28,600	28,600	57,200
	£54,900	£54,900	£109,800

Research Station - There is in existence a Research Station in Gatooma. There is only one type of soil available on the Station whereas an area containing two types - red and sand-veld - is required. Also, the Gatooma Municipality is pressing for the present site to be incorporated within the Municipal area for development purposes. No actual alternative site has as yet been selected.

Cotton Wool Factory - The present factory is an obsolete one which grew up as a result of the demand created during the war years. It is sited on the Research Station. Cotton wool production has increased from 145,000 lbs. in 1948-9 to 302,000 lbs. in 1952-3. After sales in the country, there is a surplus for export, mainly to the Union of South Africa.

The present factory is working to capacity and the new factory will be an additional one.

The site for the factory has yet to be determined.

Where the present Research Station is vacated, the old factory will be dismantled and re-erected on the site of the new one. The land will be sold and proceeds applied in reduction of indebtedness to Government. Capital from Government sources as at 31st March, 1953 stood at £1,202,394.

Dairy Marketing Board £115,000 (Terr. £95,000 Fed. £20,000).

This Board came into existence in 1952 as a result of the failure of private enterprise to handle the distribution of milk.

The purposes for which the funds are required are as follows:-

	April-June 1954	1954-5	1955-6	Total
Gwelo Dairy: Purchase	70,000			70,000
Umtali " : "	25,000			25,000
Milk Transport Services Equipment		10,000	10,000	20,000
	£95,000	£10,000	£10,000	£115,000

As at 31st March, 1953, capital stood at £210,000 which has been applied in the acquisition of the Dairymens Co-op Ltd., Salisbury £160,000 and provision of working capital £50,000.

Electricity Supply Commission £7,455,800 (Terr. £691,016 Fed. £6,764,844

Details are overleaf -

	April-June 1954	1954-5	1955-6	1956-7	Total
Generation -					
Umniati Power Station	257,090	820,220	332,250	61,900	1,471,460
Shabani	114,226	349,968	57,766	-	521,960
Gwanda	26,500	38,750	-	-	65,250
Umtali	-	-	8,000	9,500	17,500
Odzi	-	-	285,000	683,000	968,000
General Equipment	-	5,000	5,000	5,000	15,000
Sub-Total:	397,816	1,213,938	688,016	759,400	3,059,170
Distribution -					
Umtali	26,530	116,870	208,560	462,920	814,880
Central	202,990	696,170	710,020	567,040	2,176,220
Shabani	21,680	165,860	279,900	260,400	272,840
Western	39,720	144,720	186,820	254,270	625,530
Head Office	2,280	26,530	13,360	10,050	52,220
Total:	£691,016	2,364,088	2,086,676	2,314,080	7,455,860

The one entirely new project is the Odzi Station which is required to meet the demand in the Umtali area. This Station will have a capacity of 10,000 kw.

By 1955 total installed capacity of this Commission will be:-

Umniati	120,000
Shabani	31,250
Gwelo	4,500
Gwanda	15,000
Umtali	14,000
	184,750 kws.

Of the £10,000,000 loan from the International Bank £5,500,000 has been allocated to the Commission. As at 1st April, 1954 it is estimated that £4,100,000 will have been drawn leaving £1,400,000 available.

As at 31st March, 1953, capital stood at £12,758,877.

Land and Agriculture Bank of S. Rhodesia £3,895,000 (Terr. £75,000; Fed. £3,820,000).

Details are:-

	April-June 1954	1954-5	1955-6	1956-7	Total
Bank Capital -					
Ordinary	-	600,000	500,000	500,000	1,600,000
Land Settlement Board Settlers		450,000	250,000	200,000	900,000
Public Servants Housing Fund	75,000	325,000	425,000	450,000	1,275,000
Food Production Fund	-	50,000	40,000	30,000	120,000
Total:	75,000	1,425,000	1,215,000	1,180,000	3,895,000

In addition to the above, repayments which are estimated to accrue and which the Bank will have available for relending are as follows:-

	1954-5	1955-6	1956-7	Total
Ordinary Borrowers including Land Settlement Board Settlers	980,000	1,250,000	1,500,000	3,730,000
Public Servants Housing Fund	510,000	545,000	570,000	1,625,000
Food Production Fund	40,000	47,000	55,000	142,000
	£1,530,000	1,842,000	2,125,000	5,497,000

Bank Capital - Ordinary - New farms are entering the industry at the rate of 230 per annum. With this continual increase, it is not possible to estimate the ultimate capital required by the Bank before it can be self financing.

Although the Bank may lend money for the purchase or building of residential property, it has almost ceased to do so. This has been made possible to a certain extent by the growth of the Building Societies movement and the Government guarantee scheme for financial houses in connection with building loans.

Bank Capital - Land Settlement Board Settlers - One of the conditions necessary before a settler under the Ex-Servicemen's Land Settlement Scheme can obtain title is that his indebtedness to Government must be liquidated. The Bank will advance money for this purpose and to the extent of the settlers indebtedness, the monies return almost immediately to the Consolidated Revenue Fund. Once the settler has title, he ranks equally with any other farmer for Bank assistance.

Public Servants Housing Fund - Public Servants at one time could obtain loans from the Pension Fund to build or buy residential properties. The Pension Fund has been wound up and in order not to prejudice public servants, Government has agreed to make available to the Bank annually for housing loans to Civil Servants a sum equal to the previous year's pension contributions by public servants with a maximum of £500,000 per annum.

Food Production Fund - This is a special fund for making loans to food producers who are precluded from obtaining assistance from the Bank in the ordinary way.

As at 31st March, 1953, Bank capital stood at £6,468,450 (excluding Food Production Loan Fund).

Grain Marketing Board £293,400 (Terr. £60,700; Fed. £232,700).

These funds are required for the erection of storage for maize and small grains. At Aspindale storage for 500,000 bags is being erected and mechanical handling facilities will be incorporated.

At present the Board has the following storage:-

Salisbury	160,000
Aspindale	200,000
Gwelo	80,000
Bulawayo	260,000
Mt. Hampden	200,000
Gatooma	100,000
	1,000,000 bags

The additional 500,000 bags storage at Aspindale will be completed in 1954-5.

Details of the expenditure are:-

	April-June 1954	1954-5	1955-6	1956-7	Total
Aspindale:					
Grain Silos	31,200	106,200	-	-	137,400
Silo Plant & Infestation Machinery	20,000	60,000	-	-	80,000
Roads, Drainage etc.	5,000	20,000	2,000	-	27,000
Workshop	-	6,000	-	-	6,000
Quarters			5,000	-	5,000
General -					
Grain Moving & Stacking Equipment	4,500	16,000	10,000	7,500	38,000
	£60,700	£208,200	£17,000	£7,500	£293,400

Capital as at 31st March, 1953 stood at £317,247.

Forestry Commission - £630,000 (Terr.).

It is intended that this Commission will come into operation on the 1st April, 1954. Up till then, the forest services will continue to be administered departmentally.

Forestry development is based on having 85,000 acres of productive plantations by 1980 and of creating forest reserves equal to 5% of the total area of the Colony, i.e. 4,810,624 acres.

At present there are eight plantations with a productive area of 59,000 acres. A further three plantations are planned with a productive area of 26,000 acres.

Plantation output and acreages planted in recent years and estimates for the future are as follows:

	Cubic Feet	Acres Planted	Total Acreage
			11,100
1951-52	250,000	1,800	12,900
1952-53	250,000	3,100	16,000
1953-54	600,000	4,000	20,000
1954-55	750,000	4,400	24,400
1955-56	1,000,000	4,800	29,200
1956-57	1,000,000	4,800	34,000
1965-66	5,000,000	-	63,000
1975-76	11,000,000	-	79,000
1980	17,000,000	-	85,000

The production is all soft woods which is used for buildings, packages, pulp, matches, tobacco cases, tobacco hogs-heads, brush stock etc.

To treat this timber there is a mill at Stapleford with a present capacity of 500,000 cubic feet per annum. It is intended to expand this mill as follows:-

1954-55 to handle 750,000 cubic feet.
1955-56 " " 1,000,000 " "

Saw mills and timber treating plants after this period will be developed as timber production increases.

Revenue income is estimated as follows:-

1951-52	£36,275
1952-53	47,537
1953-54	101,400
1954-55	120,000
1955-56	190,000
1956-57	190,000
1965-66	879,000
1975-76	1,715,000
1980	2,944,000

To meet the programme the funds requested are as follows, inclusive of all items such as mills, treating plants, roads, water supplies, European and African quarters, transport etc. The requirements are net.

April- June 1954	£45,000
1954-5	210,000
1955-6	170,000
1956-7	205,000
	£630,000

Kariba Gorge £730,000 (Fed.).

This is not a Statutory body but it has been suggested that the project could be better administered under such an authority and it has been included in this section as a matter of convenience.

As at 31st March, 1953, £39,200 had been spent on exploratory work and a further £7,000 will be spent by 31st March, 1954.

The details of the provision of £730,000 are as follows and are intended to bring the project to a state where heavy construction work can be commenced in 1959 with a view to power being available in 1965.

	1954-5	1955-6	1956-7	Total
Agreement with Portuguese Government	2,000	-	-	2,000
Aerial Surveys including Ground Control -				
Irrigation Areas	72,000	-	-	72,000
Conservation Basin	-	120,000	100,000	220,000
Power Route Surveys	7,000	8,000	-	15,000
Road Surveys	5,000	-	-	5,000
Irrigation Areas Ground Surveys	5,000	5,000	5,000	15,000
Irrigation Areas Soil Surveys	10,000	10,000	10,000	30,000
Site Drilling & Geological Investigation	25,000	25,000	-	50,000
Hydrographic Investigation	10,000	30,000	20,000	60,000
Road Construction	26,000	80,000	80,000	186,000
Housing			20,000	20,000
Funds for Kariba Authority (if set up)	10,000	10,000	10,000	30,000
Investigation of Supplementary Hydro-electric Scheme	15,000	10,000	-	25,000
	£187,000	£298,000	£245,000	£730,000

Between 1957 and 1959 it is estimated a further £280,000 will be required.

The above does not include any cost of railway construction, nor for the erection of a cement factory which has been suggested.

PART III - LOCAL AUTHORITIES

There are six municipalities in the country including the cities of Salisbury and Bulawayo. These are empowered to borrow sums up to the equivalent of one-sixth of their rateable value. Borrowings in excess of this require the approval of the Governor which is given on the advice of the Department of Internal Affairs and the Treasury.

There are at present twenty Town Management Boards and seven Village Management Boards. These may only borrow amounts approved by the Governor.

In 1949, to avoid competition in the local money market, it was agreed that all local authorities should obtain their loan funds from Government. In 1952, this arrangement was relaxed and the cities of Salisbury and Bulawayo were given access to the market.

As at 31st March, 1953, net outstandings to local authorities stood at £15,093,600 (including £650,000 for the City of Salisbury's share of the cost of construction of Lake McIlwaine).

During the period 1st April, 1954, to 30th June, 1957 it is proposed to make available to local authorities the sum of £10,000,000 from Government sources as follows:-

	April-June 1954	1954-5	1955-6	1956-7	Total
Salisbury	312,500	1,250,000	1,250,000	1,250,000	4,062,500
Bulawayo	312,500	1,000,000	1,000,000	1,000,000	3,312,500
Other	375,000	750,000	750,000	750,000	2,625,000
	£1,000,000	£3,00 ,000	£3,000,000	£3,000,000	£10,000,000

The programmes for the period 1st April, 1954, to 30th June, 1957, to be financed by Government advances, local borrowings and own resources (rates etc.)are as below. From past experience it is certain the programmes will need to be adjusted.

	Salisbury	Bulawayo	Other	Total
Roads & Bridges	555,000	300,000	1,104,300	1,959,300
Water Supplies	412,200	1,028,500	1,192,700	2,633,400
European Housing	-	-	547,800	547,800
Native & Coloured Housing	3,020,000	1,323,000	1,328,600	5,671,600
Health & Sanitation	807,000	484,000	649,400	1,940,400
Electricity	6,608,000	2,713,500	439,100	9,760,600
Other	1,642,000	212,000	1,143,800	2,997,800
	£13,044,200	6,061,000	6,405,700	25,510,900

	April-June 1954	1954-5	1955-6	1956-7	Total
Salisbury	721,000	4,298,000	4,443,300	3,581,900	13,044,200
Bulawayo	436,000	1,742,000	1,845,500	2,037,500	6,061,000
Others	419,200	1,641,300	2,070,600	2,274,600	6,405,700
	£1,576,200	7,681,300	8,359,400	7,894,000	25,510,900

Of the £10,000,000 International Bank loan, £2,500,000 was allocated to the City of Salisbury and £2,000,000 to the City of Bulawayo. As at the 31st March, 1954 estimated drawings and balances available will be as follows:-

	Allotment	Drawings to 31.3.54	Balance
Salisbury	2,500,000	1,750,000	750,000
Bulawayo	2,000,000	1,400,000	600,000
	£4,500,000	£3,150,000	£1,350,000

The Treasury,
Salisbury.
27th August, 1953.

NORTHERN RHODESIA

DEVELOPMENT PLAN

1947 - 1957

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REVIEW OF THE NORTHERN RHODESIA TEN YEAR DEVELOPMENT PLAN

PART I - GENERAL.

1. In response to a request from the Economic and Financial Working Party, the Development Plan of Northern Rhodesia has been re-examined in the light of the division of functions between the Federal and the Territorial Governments as set out on pages 10 to 13 of The Federal Scheme (Cmd. Paper No,8754) published in February, 1953. Many of the projects in the existing Northern Rhodesia Development Plan as revised in 1951, will, of course, pass to the Federal Government and some of these, being already in the form of unfinished works, will constitute a morally inescapable commitment which the Federal Government will be required to take over and complete. The same thing will apply equally to commitments from the other two territories and it is, therefore, desirable that the requirements of all three territories, so far as Federal Subjects are concerned, should be set out in a common form. In this review, therefore, the form followed in the 1951 Review of the Southern Rhodesian Plan, has been adopted as far as possible.

2. Work began on preparation for the Northern Rhodesian Development Plan during the last war. At that stage the emphasis was primarily directed towards the development of social services for the African, but as planning proceeded, it became clear that the importance of the European element in the population, although mainly confined to the districts immediately along the line of rail, had increased and was continuing to increase so rapidly as to give a new urgency to the development of basic services which would benefit both the European and African communities. Nevertheless, throughout the Plan the original conception of social and economic uplift continues and is reflected in the manner in which the Plan has been financed. From 1948 onwards there has been a change in the bias of the plan which is now weighted on the side of economic development.

3. The first Plan envisaged a total expenditure of £13 million which has been increased by subsequent reviews first to £17 million, then to £19 million and now stands at £38 million. The third revision of the Plan is now under way and it is estimated that the total cost over the 10 year period would be £54½ million.

4. From the outset it was envisaged that finance for the execution of the Plan would be obtained from three sources. Indeed, the original motive force leading to the preparation of this Plan emanated from the Colonial Office after the establishment by the British Government of the Colonial Development and Welfare Fund. From this source, Northern Rhodesia was originally allotted £2½ million which has subsequently been increased to £2¾ million by including additional funds provided under the Central African Regional allocation. The remainder of the finance required was to be found partly by the flotation of loans for £9 million and £4 million and partly by appropriations from the annual surplus of Northern Rhodesian funds. The relative proportions of these sources have varied during the period, but the structure of the Plan as revised in 1951 was as follows:-

st of Revised Plan	£36,000,000
urces of Finance:	£
Colonial Development and Welfare Vote	2,500,000
Appropriations from Revenue:	£
1947-1951	7,500,000

	£	
an:	Brought Fwd.	£23,000,000
Original Plan	9,000,000	
Revised Plan	4,000,000	13,000,000
		£36,000,000

5. Of the £13m. of loan money included in the plan it should be mentioned that only £5m. has so far been raised and it is estimated that at the end of 1953 the loan account will be overdrawn by about £2.6m. The expenditure has to this extent been met by temporary advances from Territorial funds but this finance must be refunded as soon as additional loans are raised. This money, as it has been made available by the Legislature, has been paid into a Development Fund to ensure continuity of the Development programme and thus obviate the uncertainty inevitable under the normal Colonial system of estimating each year for a balanced budget.

6. This had the advantage that money once paid into the fund for development could not be diverted to non-development purposes and it was hoped that this would give the Plan greater flexibility in execution. At the same time it did not preclude the expenditure of any further funds available on revenue account for purposes of development. In fact, it is estimated thst since the inception of the Plan to the end of 1953 a sum of £25 million will have been spent from the Development Fund, of which £17½ million will have been found by appropriations from annual revenue and a further sum of £13.7 million will have been spent on projects of a development character outside the Plan, during the same period.

7. When the plan was under Review in 1951 it was felt that there was a danger of recurrent expenditure getting out ofcontrol. Arrangements were therefore made to limit such expenditure in advance, by requiring each department to plan its annual increases in such expenditure between 1951 and 1957 (whether due to normal expansion or special development) so that the final permissible figure for each should only be reached in 1957 - that is, at the end of the Plan. It was also considered prudent to transfer all recurrent expenditure, with one or two minor exceptions, due to the implementation of the Plan, to the Territorial Estimates, so that the increases could be met and absorbed by the annual revenue year by year during the life of the Plan. As a result of this the Plan has become a Capital Works Plan, which is easier to control in relation to the Territory's economic circumstances.

8. The Northern Rhodesia Development Plan has three major objectives: the first two apply to the whole population and the third to Africans only :-

(i) To give, on a modest scale, the bare essentials of social and economic services which all sections of the community require.

(ii) To encourage development of the natural and potential assets of the Territory but at the same time to prevent "exploitation" (used in its worst sense) of these assets.

(iii) To assist the African population to develop itself under its Native Authorities with all possible speed.

/9. Although

9. Although these objectives have continued to be the long term aim of the plan, the immediate objectives were recorded in the first (1948) review of the Plan as

(i) Increased Food Production;

(ii) More housing, European and African;

(iii) Improved Roads:

10. In order to control expenditure from the Development Fund and to direct the execution of the Plan a Development Authority was established on 4th January, 1947 and its membership now consists of three officials and four unofficials. The Development Secretary is chairman of the Authority and has a supporting secretariat staff. The powers and duties of this Authority are as follows :-

(i) The Development Authority is responsible to Government for the carrying out of development plans as approved in Legislative Council.

(ii) The Development Authority controls all development funds authorised by Legislative Council.

(iii) The Development Authority has power to call for reports on development projects as it finds desirable.

(iv) The Development Authority may after consultation with and agreement by the Standing Finance Committee vary the order in which projects are to be undertaken.

(v) The Development Authority may issue instructions, through the Secretary or Member concerned, to any department or group of departments as to priority of execution between different works or projects, provided that such instructions must not conflict with projects approved in the normal estimates as passed by the Legislature.

(vi) The Authority may authorise departments to enter into contracts for specific works or undertakings and supervise their execution.

(vii) The Development Authority submits an annual report to the Legislative Council upon the progress of all works and projects for which it is responsible.

The Development Authority is the overall controlling body but development work 'in the field' is organised and controlled by Provincial and Area teams. These teams are presided over by administrative officers and include technical and professional officers together with representatives of the general public. For the rural development section of the Plan the territory was originally divided into 10 development areas, but this arrangement has had to be modified and the following general guiding principles have been adopted for classifying the rural areas for the purpose of development plans :-

(i) Intensive Development Areas which, owing to natural advantages of soil, water, access to markets and the like, would naturally yield the highest return for effort made to develop them.

/(ii) Development

(ii) Development Areas which are capable of intensive development and will receive it when staff and funds become available.

(iii) Other areas which appear to be too poor in quality to maintain a concentration of population earning a reasonable living from the land.

Teams consisting of the Provincial Administration and departmental officers directly concerned are responsible for the administration and for proposals for the improvement of these areas. The work of the Area Teams is in turn supervised and controlled by the Provincial Teams which consider the various proposals in the light of the needs of the whole Province and their programmes in turn are subject to the overall supervision of the Development Authority.

11. When the Plan was originally prepared, it was anticipated that it would be reviewed every three years, but the first review took place in 1948, largely on account of the need to attune the development programme to the Empire economic crisis which had then begun. At this stage it was suggested that reviews should become annual, but in point of fact the second review did not take place until 1951 and the third review is now being made.

12. The Northern Rhodesia Development Plan is, in the main, concerned with the provision of basic services though agrarian and rural development projects figure prominently in it. As in Southern Rhodesia, it has been thepractice to leave purely commercial economic development to private enterprise and so far as the basic industry of Northern Rhodesia - copper mining - is concerned, private enterprise has been eager to undertake as much development as possible. The Northern Rhodesia Plan contains no provision for the expansion of Rhodesia Railways but it has to be borne in mind that during the six years that the Plan has been in existence Northern Rhodesia has provided by way of loan a sum of £14½ million for the Rhodesia Railways. Similarly, no provision has been made in the Plan for the Kafue Hydro-Electric scheme but appropriations from revenue of £1½m. have been made to a special reserve for Power project. These two items are the most important separate items for which finance has been or will have to be provided from revenue outside the Development Plan but, as has been mentioned in paragraph 5 above, there has been concurrent development in almost all fields financed directly from territorial revenue as shown in Part II of this review.

PART II - DESCRIPTION OF PROJECTS WHICH HAVE BEEN INCLUDED UNDER THE VARIOUS SECTIONS OF THE PLAN

(1) Posts and Telegraphs Department

Total Estimated Cost (Dev. Plan)	- Federal Account	£991,892
	- Territorial "	NIL
	- Expenditure 1947-1953	£539,144
Territorial Revenue Expenditure 1947-1953	-	£579,300

****

The Development Plan provides for the extension of services under the following main heads :-

(a) Main telephone Trunk route along the Line of Rail;

(b) Lusaka-Chirundu section of the direct line from Lusaka to Salisbury;

(c) Scheme for linking Provincial and District Headquarters;

(d) Extension of Telephone Exchanges in urgan areas;

(e) Extension of Rural telephone facilities;

(f) Improvement of Postal Services by building new Post Offices and extending existing ones.

2. Amongst the main items which have not yet been undertaken and which are urgently required and which may cost about £200,000 are new post offices at Lusaka and Broken Hill.

(2) PUBLIC WORKS

(a) Health Department Buildings

Total estimated cost (Development Plan)	- Federal Account	£3,344,340
	- Territorial "	£244,200
	- Expenditure 1947-1953	- £1,133,968
Territorial Expenditure 1947 - 1953		£193,000

****

Four new hospitals have been completed under the Development Plan and a mental wing added to the Livingstone Hospital. One hospital has been extended. Four more hospitals (including Stage I of a Mental Hospital) and an Entomological Laboratory, have still to be built and the European and African hospitals in Lusaka will require considerable extensions or replacement in the near future.

2. Among the new hospitals tø be built are those at Mazabuka, Livingstone and Kitwe. The Kitwe hospital will cater for both Europeans and Africans and will contain some 50 beds for T.B.

/patients.

patients. The Livingstone hospital is to be a general hospital for Europeans, while that at Mazabuka is to serve both races. The mental hospital is to be built at Lusaka, and will provide for African patients in the first instance, but Europeans will also be accommodated when the scheme is complete.

3. The total cost of these hospitals is expected to be approximately £1,900,000.

(b) <u>European Education Department buildings.</u>

Total estimated cost (Development Plan)	- Federal Account	£4,147,301
	- Territorial "	NIL
	- Expenditure 1947/1953	£1,399,907
Territorial Revenue Expenditure 1947-1953	-	£111,500

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New buildings completed under the Development Plan include large Schools for Infants at seven towns, four Indian Schools, four Primary Schools, four Technical Centres and two Hostels. Numbers of schools all over the Territory have been extended. Among the major works still to be completed are seven Secondary Schools, seven Primary Schools four Infants' Schools and five hostels.

2. The Secondary Schools, which are expected to cost approximately £2,300,000, are to be built at Lusaka, Mufulira, Luanshya, Broken Hill, Ndola, Chingola and Kitwe, and will provide for 500 boarders and 3,000 day scholars. Primary schools costing approximately £300,000 are to be built at Chingola, Luanshya, Mufulira, Broken Hill, Lusaka, Livingstone and Kitwe, and will provide for 300 boarders and 2,100 day scholars. New Infants' Schools are to be built at Kitwe, Livingstone, Lusaka and Luanshya at a cost of approximately £200,000 for 1,200 day scholars. Schools for Coloured children are to be built at Lusaka and Ndola.

3. It seems likely, however, that with the steady rate of increase in the schoolgoing population and with the development of new mining townships, it will certainly be necessary to enlarge the European Education Department's building programme.

3. <u>ROADS.</u>

Total estimated cost (Development Plan)	- Federal Account	£4,186,809
	- Territorial "	£2,453,667
	- Expenditure 1947-1953	£3,188,465
Territorial Revenue Expenditure 1947-1953		£660,400

x x x x x

/The..

The total estimated cost of the road programme in the Development Plan amounts to £6,640,476. Before the projects included in the Development Plan were started there existed outside townships only 49 miles of tarred road. The Roads section of the Plan aimed at

(a) Improving the Inter-Territorial Roads in the Territory to Class I or Class II standard according to the volume of traffic;

(b) Steady improvement of other main road arteries to Class II, III or IV Standard according to traffic requirements;

(c) Development and expansion of Road Boards for the improvement of district roads in European farming areas.

2. In pursuance of these aims, the following lengths of Inter-Territorial Road will probably have been completed to Class I or Class II standard by the end of 1953 at the estimated cost indicated against each:-

(a) Lusaka/Kafue/Chirundu	: 87 miles	£780,222
(b) Lusaka/Broken Hill	: 95 miles	£422,000
(c) Livingstone to 30 miles North		£123,000
(d) Mazabuka to Kafue	: 44 miles	£175,779
(e) Magoye River Bridge to Mazabuka	: 15.7 miles	£76,000
(f) Great East Road - Lusaka to 12 miles E.		£53,000
(g) Broken Hill to Kapiri/Mposhi (Class I) (37 miles)		£231,000
(h) Kapiri/Mposhi to Tunduma (Class II) (507 miles)		£1,250,000

N.B: E.C.A. have made a grant of £ ½m. towards the cost of this road.

3. In addition, by the end of 1953 work (either by contract or departmental labour) will be in progress on the following lengths of road:-

(a) Magoye Road Bridge to Choma (Class II) (87 miles)	£279,000
(b) Chibuluma/Kitwe (Class I) - 7½ miles	£40,000
(c) Chingola to Konkola (Class I) - 21 miles	£170,000
(d) Ndola to Mufulira (Class I) - 40 miles	£127,000

4. In addition to the above, it has been decided to increase the width of the tarred surface of the Copperbelt Roads from 10' to 20' at a cost of £180,000 for 94 miles. This is urgent as the density of traffic exceeds that which can be properly accommodated on the single lane bituminous surface provided. The improvement of the Great East Road from Lusaka to Fort Jameson and Nyasaland is becoming a matter of urgency and the matter is being investigated but it is at present not

/possible

possible to give any useful Estimate of cost. The road from Chingola to the Portuguese Border near Mwinilungu via Solwezi and Mwinilungu will also have to be brought up to Class III standard. The distance from Chingola to the Angola Border is approximately 380 miles.

5. Improvement of the communications to the Barotseland Protectorate have also been under consideration and will soon become a matter of urgency, but at present owing to the peculiar characteristics of the soil on part of the road, Mumbwa/Mankoya/Mongu it has not yet been possible to formulate even an approximate estimate of cost.

4. BRIDGES.

Total estimated cost (Development Plan)	: Federal Account	£99,944
	Territorial "	£50,056
	Expenditure 1947-1953	£108,287
Territorial Revenue Expenditure 1947-1953		£141,801

x x x x x x x

The programme of replacing temporary timber bridges with bridges of more permanent materials has continued and a total length of 490 feet of bridging was completed by 1952. Some of this work was started in 1951 and at the end of 1952 work was in hand on a further 250 feet. Three bridges totalling 271 feet in length were completed exclusive of bridges forming part of main road contracts.

5. AIRPORTS and AIRFIELDS.

Total estimated cost (Development Plan)	- Federal Account	£1,304,291
	- Territorial "	£ NIL
	- Expenditure 1947/53	£1,299,013
Territorial Revenue Expenditure 1947/53		£ 334,800

x x x x x x x

The International Airport at Livingstone was completed in 1951 and now serves inter alia the regular Comet service between London and Johannesburg. The runway at Lusaka Airport has been improved recently, and is now capable of taking Comets and Hermes aircraft. At Ndola the runway is at present being brought up to a bearing strength of £45,000 lbs. individual static wheel load at a cost of £65,000. At Mongu in Barotseland, a new airfield capable of taking aircraft up to Dakota weight has been finished.

2. There are no major airport projects at present committed, but it is expected that a new airport for Lusaka will become a necessity within the next ten years.

/6. Loans..

6. LOANS TO LOCAL AUTHORITIES.

Total estimated cost (Development Plan) :	Federal Account	£ NIL
	Territorial "	£7,500,000
	Expenditure 1947/1953	£1,250,000
Territorial Revenue Expenditure 1947-1953		£3,205,000

x x x x x x x

Prior to 1948 the Government had from time to time made appropriations from Revenue for loans to Local Authorities to assist them in providing essential services for their increasing population.

2. In 1948 a sum of £500,000 was provided in the Development Plan to act as a "primer" to finance in part the Local Authorities initial development projects. In the 1951 Review this sum was increased to £3,500,000.

3. By 1951 many of the Local Authorities had prepared their reviews of development projects for which loans from the Central Government would be required, and in 1950 a Local Authorities Loans Board was set up, to control the money from time to time provided either from the Development Plan or from Territorial Appropriations of Revenue which had by this time reached £2¼m.

4. The various development schemes envisaged included Local Authority European Staff Housing, Loan provision for owner-housing schemes, Essential Services such as Water, Sewerage and Electricity schemes, but did not include (a) loans to Local Authorities for the construction of African Housing in urban areas and (b) for their power requirements, for both of which some provision had been made in appropriate sections of the Development Plan.

7. ELECTRICITY AND WATER SUPPLIES.

Total estimated cost (Development Plan) :	Federal Account	£
	Territorial "	£3,531,238
	Expenditure 1947/1953	£1,384,751
Territorial Revenue Expenditure 1947-1953		£ 35,400

x x x x x x x

The figures given for Electricity and Water Supplies in this section relate almost entirely to Lusaka where, as a legacy from the circumstances in which the capital of Northern Rhodesia came to be built there, the peculiar situation has occurred that the Central Government has hitherto been responsible for the provision of electric power and water. The rapid expansion of the town has necessitated steady expansion of the existing Power house and the construction of a new one at a total cost of £850,000 - work on which is now being started.

2. Similarly it has been necessary to instal a greatly enlarged water reticulation system and to increase the number of bore wells to a capacity of 5 million gallons per day.

/3. Arrangements

3. Arrangements are, however, well advanced to hand over the management of the Water Scheme to the Lusaka Municipal Board and of the Lusaka Electricity Undertaking to a Limited Liability Company, in which, it should be noted, the Government will be the only effective Shareholder.

8. TOURIST DEVELOPMENT.

There are no major items.

9. HEALTH AND EUROPEAN EDUCATION.

As the Development Plan is now confined to Capital Works, it follows that the entire expenditure under these two heads is incurred in the form of buildings and is covered by paragraph 2 above.

PART III

FINANCIAL SUMMARY AND SUPPORTING SCHEDULES

SUMMARY OF FINANCES

Details of Project	Total Estimated Cost		Expend-iture 31.12.53	Estimate 1.1.54 to 30.6.54	Estimate 1.7.54 to 30.6.55		Estimate 1.7.55 to 30.6.56		Estimate 1.7.56 to 30.6.57		Estimated Expenditure to be c/f
	F	T	T	T	F	T	F	T	F	T	
Health	3,344,340	244,200	1,133,968	146,249	503,769	8,027	565,267	10,000	476,260	10,000	735,000
African Education	-	1,794,625	846,424	123,798	-	252,885	-	219,656	-	186,924	164,938
European Education	4,147,301	-	1,399,907	416,280	915,613	-	754,000	-	531,500	-	130,001
Agriculture	-	925,342	622,514	94,828	-	109,000	-	69,000	-	30,000	-
Forestry	-	477,775	297,757	36,153	-	67,165	-	42,675	-	34,025	-
Veterinary	-	312,611	184,001	21,030	-	37,680	-	36,500	-	33,400	-
Game & Tsetse	-	481,467	345,543	21,421	-	40,850	-	38,250	-	35,403	-
Rural Development	-	1,000,000	474,098	86,843	-	191,059	-	135,500	-	112,500	-
Water Dev. & Irrigation	-	1,479,853	1,031,412	33,441	-	150,000	-	150,000	-	115,000	-
Economic & Tourist Dev.	100,000	142,430	195,999	23,451	10,408	6,922	-	5,350	-	300	-
Posts & Telegraphs	991,892	-	539,144	32,898	172,350	-	140,500	-	105,000	-	2,000
P.W.D. Gen. Light & Water Schemes	-	3,531,238	1,384,751	302,487	-	795,000	-	575,000	-	474,000	-
P.W.D. Gen. Govt. Buildings	253,982	940,243	648,092	112,648	48,500	204,770	60,000	60,215	60,000	-	-
" " Staff & Equip.	-	1,224,709	835,110	89,599	-	100,000	-	100,000	-	100,000	-
" " Police Stations	-	302,445	276,021	26,424	-	-	-	-	-	-	-
" " African Housing	-	6,550,000	3,814,914	185,086	-	850,000	-	850,000	-	850,000	-
" " Euro. Housing (Staff)	-	5,735,287	4,314,482	361,559	-	703,246	-	256,000	-	100,000	-
" Roads	4,186,809	2,453,667	3,188,465	350,011	977,000	274,500	685,000	284,500	640,000	241,000	-
" Bridges	99,944	50,056	108,287	21,713	7,301	3,199	6,301	3,199	-	-	-
" Aerodromes	1,304,291	-	1,299,013	-	2,178	-	1,500	-	1,600	-	-

Contd. overleaf

Details of Project	Total Estimated Cost		Expend-iture 31.12.53	Estimate 1.1.54 to 30.6.54	Estimate 1.7.54 to 30.6.55		Estimate 1.7.55 to 30.6.56		Estimate 1.7.56 to 30.6.57		Estimated Expenditure to be c/f
	F	T	T	T	F	T	F	T	F	T	
SUMMARY OF FINANCES (Contd).											
Military Cantonments	800,000	-	50,000	-	100,000	-	150,000	-	250,000	-	250,000
Loans to Local Authorities	-	7,500,000	1,250,000	350,000	-	2,000,000	-	2,000,000	-	1,900,000	-
Co-op Societies	-	120,000	44,100	15,900	-	20,000	-	20,000	-	20,000	-
Miscellaneous	132,600	697,129	519,977	70,301	30,000	75,951	30,000	68,500	10,000	25,000	-
	15,361,159	35,963,077	24,803,979	2,922,120	2,767,119	5,890,254	2,392,568	4,924,345	2,074,360	4,267,552	1,281,939

Item No.	Details of Project	Total Estimated Cost		Expenditure 31.12.53	1.1.54 to 30.6.54	1.7.54 to 30.6.55		1.7.55 to 30.6.56		1.7.56 to 30.6.57		Expenditure likely to be c/f
		F	T	T	T	F	T	F	T	F	T	
	HEALTH											
97 1.	Kitwe Hospital	854,000	-	25,000	25,000	150,000	-	150,000	-	150,000	-	354,000
98 1.	Extension to Afr. Med. Ed. and Afr. Hospital	430,000	80,000	12,973	4,000	130,000	8,027	200,000	10,000	100,000	10,000	35,000
2.	Additional Afr. Urban Clinics	-	9,400	4,366	-	2,517	-	2,517	-	-	-	-
3.	Leprosy Centre	-	5,800	4,444	1,356	-	-	-	-	-	-	-
4.	Rural Health Centres	-	34,000	33,537	463	-	-	-	-	-	-	-
5.	Rural Hospitals	-	115,000	94,068	20,932	-	-	-	-	-	-	-
6.	Cottage Hospitals	33,400	-	20,000	13,400	-	-	-	-	-	-	-
7.	Lusaka Eur. Hosp. & Extension	535,000	-	16,072	18,928	-	-	25,000	-	150,000	-	325,000
8.	Broken Hill Hosp.	650,000	-	650,000	-	-	-	-	-	-	-	-
9.	Balovale Hospital	41,000	-	41,000	-	-	-	-	-	-	-	-
10.	Stainless Steel Equip.	20,000	-	14,607	-	5,393	-	-	-	-	-	-
11.	Mental Hosp.Stage 1.	250,000	-	5,000	37,500	75,000	-	75,000	-	57,500	-	-
99 1.	Broken Hill Hosp.	150,000	-	150,000	-	-	-	-	-	-	-	-
2.	Livingstone Hosp.	230,000	-	4,240	7,000	100,000	-	100,000	-	18,760	-	-
3.	Extensions to Mine Hospitals	20,440	-	-	1,831	18,609	-	-	-	-	-	-
4.	Choma Hospital	57,000	-	51,161	5,839	-	-	-	-	-	-	-
5.	Entomological Lab.	21,000	-	-	-	-	-	-	-	-	-	21,000
6.	Chikankata Hosp.	15,000	-	-	2,500	7,250	-	5,250	-	-	-	-
7.	Eur. Staff Qtrs Lusaka Afr. Hosp.	30,000	-	-	7,500	15,000	-	7,500	-	-	-	-

Contd..overleaf.

Item No.	Details of Project	Total Estimated Cost		Expend-iture 31.12.53	Estimate 1.1.54 to 30.6.54	Estimate 1.7.54 to 30.6.55		Estimate 1.7.55 to 30.6.56		Estimate 1.7.56 to 30.6.57		Estimated Expenditure to be C/F
		F	T	T	T	F	T	F	T	F	T	
	HEALTH (contd.)											
9 8.	Mental Ward Living-stone	7,500	-	7,500	-	-	-	-	-	-	-	-
		3,344,340	244,200	1,133,968	146,249	503,769	8,027	565,267	10,000	476,260	10,000	735,000

Item No.	Details of Project	Total Estimated Cost		Expend-iture 31.12.53	Estimate 1.1.54 to 30.6.54	Estimate 1.7.54 to 30.6.55		Estimate 1.7.55 to 30.6.56		Estimate 1. 7.56 to 30. 6.57		Estimated Expenditure to be C/F
		F	T	T	T	F	T	F	T	F	T	
	AFRICAN EDUCATION											
98 36.	Gov. School Buildings	-	1,034,978	319,410	40,630	-	170,000	-	170,000	-	170,000	164,938
37.	Building grants to missions	-	182,156	95,682	26,818	-	30,000	-	29,656	-	-	-
38.	Building grants Vill. Schools	-	179,424	107,644	14,000	-	20,856	-	20,000	-	16,924	-
39.	Cap. Exp. Dev. Area Schools	-	54,529	39,469	4,031	-	11,029	-	-	-	-	-
40.	Mass Literacy	-	5,222	3,722	500	-	1,000	-	-	-	-	-
41.	African Secondary Schools	-	147,000	131,922	15,078	-	-	-	-	-	-	-
42.	Industrial Training Centres	-	52,000	15,000	17,000	-	20,000	-	-	-	-	-
43,	Assembly Hall Sec. School	-	15,000	9,898	5,102	-	-	-	-	-	-	-
-	Items completed	-	40,316	40,316	-	-	-	-	-	-	-	-
99 21.	David Livingstone Sec. School Lusaka	-	72,228	72,228	-	-	-	-	-	-	-	-
22.	Technical School Munali	-	11,133	11,133	-	-	-	-	-	-	-	-
-	Balance for allocation	-	639	-	639	-	-	-	-	-	-	-
		-	1,794,625	846,424	123,789	-	252,885	-	219,656	-	186,924	164,938

Item No.	Details of Project	Total Estimated Cost.		Expend-iture 31.12.53	Estimate 1.1.54 to 30.6.54	Estimate 1.7.54 to 30.6.55		Estimate 1.7.55 to 30.6.56		Estimate 1.7.56 to 30.6.57		Estimated Expenditure to be C/F
		F	T	T	T	F	T	F	T	F	T	
	EUROPEAN EDUCATION											
97 10.	Lusaka Secondary Sch.	842,150	-	250,000	122,150	200,000	-	170,000	-	100,000	-	-
11.	Mufulira Secondary Sch.	200,000	-	25,000	12,500	60,000	-	60,000	-	42,500	-	-
12.	Luanshya Secondary Sch.	200,000	-	25,000	12,500	60,000	-	60,000	-	42,500	-	-
13.	Broken Hill Secondary School	200,000	-	25,000	12,500	60,000	-	60,000	-	42,500	-	-
14.	Lusaka Primary School Hostel	140,000	-	25,000	12,500	50,000	-	50,000	-	2,500	-	-
15.	Kitwe Infants School	60,000	-	10,000	5,000	20,000	-	20,000	-	5,000	-	-
16.	Livingstone Infants School	68,000	-	25,000	12,500	20,000	-	10,500	-	-	-	-
17.	Chingola Junior Sch.	35,000	-	20,000	10,000	5,000	-	-	-	-	-	-
18.	Lusaka Coloured Sch.	10,000	-	7,500	2,500	-	-	-	-	-	-	-
19.	Ndola Coloured Sch.	15,000	-	4,000	2,000	9,000	-	-	-	-	-	-
20.	Ndola Secondary Sch.	200,000	-	-	12,500	60,000	-	60,000	-	42,500	-	25,000
21.	Chingola Secondary School	200,000	-	-	10,000	60,000	-	60,000	-	60,000	-	10,000
98 61.	Luanshya Indian Sch.	6,900	-	5,900	1,000	-	-	-	-	-	-	-
62.	Lusaka Infants Sch. F.S.M.	29,950	-	29,950	-	-	-	-	-	-	-	-
63.	Kitwe Primary Sch.	70,000	-	30,000	-	20,000	-	20,000	-	-	-	-
64.	Katapola Extensions	18,000	-	6,000	-	12,000	-	-	-	-	-	-
65.	Technical Centres	43,000	-	21,494	3,506	18,000	-	-	-	-	-	-
66.	Fort Jameson School & Hostel	83,000	-	30,338	20,962	31,700	-	-	-	-	-	-

Contd -5-

Item No.	Details of Project	Total Estimated Cost		Expend-iture 31.12.53	Estimate 1.1.54 to 30.6.54	Estimate 1.7.54 to 30.6.55		Estimate 1.7.55 to 30.6.56		Estimate 1.7.56 to 30.6.57		Estimated Expenditure to be C/F
		F	T	T	T	F	T	F	T	F	T	
	EUROPEAN EDUC. (contd)											
8.67.	Livingstone Indian School	16,100	-	7,100	-	-	-	4,500	-	4,500	-	-
68.	Lusaka Indian School	16,100	-	7,100	-	-	-	4,500	-	4,500	-	-
69.	Ndola Indian School	6,400	-	5,900	-	-	-	500	-	-	-	-
70.	Ndola Infants School	68,000	-	16,260	19,740	32,000	-	-	-	-	-	-
71.	Mufulira Primary School Ext. F.S.M.	9,050	-	9,050	-	-	-	-	-	-	-	-
72.	Luanshya Primary Sch. Ext. F.S.M.	8,000	-	8,000	-	-	-	-	-	-	-	-
73.	Silver Rest Primary School & Hostel	120,000	-	20,000	30,000	30,000	-	30,000	-	10,000	-	-
74.	Lusaka Girls School Ext.	40,000	-	5,389	4,611	10,000	-	10,000	-	10,000	-	-
75.	Lusaka Boys Primary School	80,000	-	-	10,000	20,000	-	20,000	-	30,000	-	-
76.	Kitwe Secondary School	125,000	-	4,400	15,600	30,000	-	30,000	-	45,000	-	-
77.	Indian & Coloured Teachers Houses	1	-	-	-	-	-	-	-	-	-	1
78.	Mazabuka Codrington School & Hostel	140,000	-	-	15,000	30,000	-	30,000	-	50,000	-	15,000
79.	B.H. Primary Sch. Hostel	110,000	-	-	10,000	20,000	-	30,000	-	40,000	-	10,000
.121.	Hostel Lusaka	130,622	-	130,622	-	-	-	-	-	-	-	-
122.	Boys Primary Sch. Lusaka	70,000	-	2,087	20,000	27,913	-	20,000	-	-	-	-
123.	Infants Sch. Broken Hill	67,870	-	46,975	3,895	17,000	-	-	-	-	-	-
124.	Infants Sch. Kitwe	61,680	-	59,467	2,213	-	-	-	-	-	-	-

Contd. -6-

Item No.	Details of Project	Total Estimated Cost		Expenditure 31.12.53	Estimate 1.1.54 to 30.6.54	Estimate 1.7.54 to 30.6.55		Estimate 1.7.55 to 30.6.56		Estimate 1.7.56 to 30.6.57		Estimated Expenditure to be C/F
		F	T	T	T	F	T	F	T	F	T	
	EUROPEAN EDUC.(contd)											
25.	Infants Sch. Luanshya	67,370	-	61,297	6,573	-	-	-	-	-	-	-
26.	Chingola Infants Sch.	68,000	-	57,419	4,581	6,000	-	-	-	-	-	-
27.	Mufulira Infants Sch.	67,870	-	63,269	4,601	-	-	-	-	-	-	-
28.	European School Kafue	3,576	-	576	-	3,000	-	-	-	-	-	-
29.	Extensions Boys School Lusaka	6,838	-	6,838	-	-	-	-	-	-	-	-
30.	School Buildings Emmasdale	14,720	-	12,345	2,375	-	-	-	-	-	-	-
31.	Secondary Sch. Lusaka	261,550	-	261,550	-	-	-	-	-	-	-	-
32.	Secondary Sch. Kitwe	75,000	-	5,000	-	-	-	-	-	-	-	700,000
33.	Boys Sch. Lusaka F.S.M.	6,488	-	6,488	-	-	-	-	-	-	-	-
34.	Broken Hill F.S.M.	7,449	-	7,089	360	-	-	-	-	-	-	-
35.	Ndola F.S.M.	9,054	-	7,777	1,277	-	-	-	-	-	-	-
36.	Luanshya F.S.M.	6,666	-	6,666	-	-	-	-	-	-	-	-
37.	Kitwe "	5,746	-	3,557	2,189	-	-	-	-	-	-	-
38.	Mufulira F.S.M.	5,506	-	4,047	1,459	-	-	-	-	-	-	-
39.	Chingola "	5,826	-	3,390	2,436	-	-	-	-	-	-	-
40.	Mazabuka "	3,617	-	3,617	-	-	-	-	-	-	-	-
41.	Livingstone "	7,457	-	7,457	-	-	-	-	-	-	-	-
42.	Hostel Ext. Lusaka	18,666	-	13,609	5,057	-	-	-	-	-	-	-
43.	Woodlands F.S.M.	15,000	-	4,829	2,171	4,000	-	4,000	-	-	-	-
44.	Elect. Supp.Codrington Hostel	579	-	555	24	-	-	-	-	-	-	-

Item No.	Details of Project	Total Estimated Cost.		Expend-iture 31.12.53	Estimate 1.1.54 to 30.6.54	Estimate 1.7.54 to 30.6.55		Estimate 1.7.55 to 30.6.56		Estimate 1.7.56 to 30.6.57		Estimated Expenditure to be C/F
		F	T	T	T	F	T	F	T	F	T	
	AGRICULTURE											
98 162.	Research Services (Recurrent)	-	125,000	35,854	9,146	-	25,000	-	25,000	-	30,000	-
163.	Research Services (Capital)	-	190,128	102,708	37,420	-	25,000	-	25,000	-	-	-
164.	Extension Services Field Operations	-	178,190	119,157	19,033	-	40,000	-	-	-	-	-
166.	Training for Africans	-	36,449	36,449	-	-	-	-	-	-	-	-
167.	Cap. Works - Ext Services for Afr.Ag.	-	128,000	77,000	13,000	-	19,000	-	19,000	-	-	-
169.	Bush Clearing Unit	-	25,000	24,955	45	-	-	-	-	-	-	-
173.	Soil Conservation Unit	-	75,000	65,823	9,177	-	-	-	-	-	-	-
-	Completed Items	-	57,575	57,575	-	-	-	-	-	-	-	-
9 31.	Soil Conservation	-	100,000	99,481	519	-	-	-	-	-	-	-
32.	Aerial Survey	-	10,000	3,512	6,488	-	-	-	-	-	-	-
		-	925,342	622,514	94,828	-	109,000	-	69,000	-	30,000	-

Item No.	Details of Project	Total Estimated Cost		Expend-iture 31.12.53	Estimate 1.1.54 to 30.6.54	Estimate 1.7.54 to 30.6.55		Estimate 1.7.55 to 30.6.56		Estimate 1.7.56 to 30.6.57		Estimated Expenditure to be C/F
		F	T	T	T	F	T	F	T	F	T	
	FORESTRY											
191.	Forestry School	-	60,000	33,575	9,425	-	6,000	-	6,000	-	5,000	-
194.	Utilization of Timber Investigations	-	8,594	8,594	-	-	-	-	-	-	-	-
195.	Capital Works for For. Development	-	89,660	74,572	588	-	5,000	-	5,000	-	4,500	-
196.	Forest Development & Improvement	-	125,000	92,054	2,946	-	10,000	-	10,000	-	10,000	-
197.	Survey of Timber Resources	-	60,000	43,675	6,325	-	5,000	-	5,000	-	-	-
198.	Visits of Specialist Officers	-	15,282	11,839	443	-	1,000	-	1,000	-	1,000	-
199.	Forest Research Stations (Capital)	-	40,600	14,342	6,258	-	20,000	-	-	-	-	-
200.	Forest Research Stations (Recurrent)	-	37,400	5,133	3,867	-	9,400	-	9,475	-	9,525	-
201.	Check list of Trees & Plants	-	5,000	-	-	-	2,000	-	2,000	-	1,000	-
202.	Forest Research Officer (Capital)	-	11,820	2,400	4,830	-	4,590	-	-	-	-	-
203.	" " " (Rec.)	-	13,500	3,029	1,471	-	3,000	-	3,000	-	3,000	-
204.	Training of Local Foresters & F.C.S in U.K.	-	2,375	-	-	-	1,175	-	1,200	-	-	-
	Completed Projects	-	8,544	8,544	-	-	-	-	-	-	-	-
		-	477,775	297,757	36,153	-	67,165	-	42,675	-	34,025	-

Item No.	Details of Project	Total Estimated Cost		Expend-iture 31.12.53	Estimate 1.1.54 to 30.6.54	Estimate 1.7.54 to 30.6.55		Estimate 1.7.55 to 30.6.56		Estimate 1.7.56 to 30.6.57		Estimated Expenditure to be C/F
		F	T	T	T	F	T	F	T	F	T	
	VETERINARY											
	Completed items	-	8,555	8,555	-	-	-	-	-	-	-	-
98 221.	Additional Equipment & Facilities	-	51,000	30,401	6,599	-	5,000	-	5,000	-	4,000	-
222.	Capital Works & Additional Staff	-	73,198	43,140	3,058	-	9,000	-	9,000	-	9,000	-
223.	Disease Eradication	-	51,835	32,662	2,173	-	6,000	-	6,000	-	5,000	-
224.	Livestock Improvement & Management	-	45,055	24,285	3,770	-	6,000	-	6,000	-	5,000	-
226	Research into Disease of Animals	-	12,556	6,062	2,094	-	1,500	-	1,500	-	1,400	-
230	Animal Husb. Res. & Dem. (Cap.)	-	11,818	11,451	367	-	-	-	-	-	-	-
231	Animal Husb. Res. & Dem. (Rec.)	-	5,682	-	-	-	1,682	-	2,000	-	2,000	-
232.	Pasture Management (Cap.)	-	8,000	5,596	404	-	2,000	-	-	-	-	-
233.	" " (Rec.)	-	8,150	152	-	-	1,998	-	2,500	-	3,500	-
234.	Grass Drying (Cap.)	-	4,750	3,554	1,196	-	-	-	-	-	-	-
235.	" " (Rec.)	-	8,125	4,193	932	-	1,500	-	1,500	-	-	-
236.	T.I.F.A. Fog Spray	-	3,887	3,679	208	-	-	-	-	-	-	-
237	Import of Cattle from Tanganyika	-	20,000	10,271	229	-	3,000	-	3,000	-	3,500	-
		-	312,611	184,001	21,030	-	37,680	-	36,500	-	33,400	-

Item No.	Details of Project	Total Estimated Cost		Expenditure 31.12.53	Estimate 1.1.54 to 30.6.54	Estimate 1.7.54 to 30.6.55		Estimate 1.7.55 to 30.6.56		Estimate 1.7.56 to 30.6.57		Estimated Expenditure to be C/F
		F	T	T	T	F	T	F	T	F	T	
	WATER DEVELOPMENT AND IRRIGATION.											
98 361	Water Supplies	-	1,208,472	908,559	913	-	100,000	-	100,000	-	100,000	-
362	Irrigation	-	264,572	118,092	31,480	-	50,000	-	50,000	-	15,000	-
364	Hydro Survey-Bangweulu Report costs	-	1,064	16	1,048	-	-	-	-	-	-	-
	Items completed	-	4,745	4,745	-	-	-	-	-	-	-	-
		-	1,479,853	1,031,412	33,441	-	150,000	-	150,000	-	115,000	-

Item No.	Details of Project	Total Estimated Cost.		Expend-iture 31.12.53	Estimate 1.1.54 to 30.6.54	Estimate 1.7.54 to 30.6.55		Estimate 1.7.55 to 30.6.56		Estimate 1.7.56 to 30.6.57		Estimated Expenditure to be C/F
		F	T	T	T	F	T	F	T	F	T	
	GAME & TSETSE											
98 253	Expansion of Dept. Services	-	212,399	155,135	7,264	-	16,500	-	16,500	-	17,000	-
256	Tsetse Survey Field Research Unit	-	24,925	16,543	2,382	-	3,000	-	3,000	-	-	-
257	Fish Farming Development (Cap.)	-	30,558	28,992	1,566	-	-	-	-	-	-	-
258	Fish Farming Development (Recurrent)	-	14,560	9,605	2,355	-	2,600	-	-	-	-	-
259	Kafue National Parks	-	55,000	22,122	3,475	-	10,000	-	10,000	-	9,403	-
260	Minor Scheme Tsetse Control & Research	-	29,142	26,801	2,341	-	-	-	-	-	-	-
263	Kafue National Parks Rds.	-	8,000	5,962	2,038	-	-	-	-	-	-	-
264	Fish Farming Ext.	-	26,500	-	-	-	8,750	-	8,750	-	9,000	-
	Completed Items	-	80,383	80,383	-	-	-	-	-	-	-	-
		-	481,467	345,543	21,421	-	40,850	-	38,250	-	35,403	-

Item No.	Details of Project	Total Estimated Cost		Expend-iture 31.12.53	Estimate 1.1.54 to 30.6.54	Estimate 1.7.54 to 30.6.55		Estimate 1.7.55 to 30.6.56		Estimate 1.7.56 to 30.6.57		Estimated Expenditure to be C/F
		F	T.	T	T	F	T	F	T	F	T	
	RURAL DEVELOPMENT											
98 282	Dev. Centres Cap. Works	-	128,500	90,152	10,348	-	20,000	-	8,000	-	-	-
286	Dev. Areas Cap. Works	-	131,000	88,879	21,121	-	21,000	-	-	-	-	-
288	Rural Dev. Projects	-	355,000	152,048	42,952	-	60,000	-	50,000	-	50,000	-
291	Headquarters Expend-iture	-	15,000	5,201	799	-	3,000	-	3,000	-	3,000	-
293	Expert Investigations	-	7,000	1,908	-	-	2,092	-	1,500	-	1,500	-
294	Import of Cattle from Tanganyika	-	-	-	-	-	-	-	-	-	-	-
295	Hydro Survey of Lukanga Swamp	-	2,940	2,034	906	-	-	-	-	-	-	-
296	Nutrition & Health Scheme	-	70,067	19,350	10,717	-	25,000	-	15,000	-	-	-
	Completed Items	-	114,526	114,526	-	-	-	-	-	-	-	-
	Funds awaiting allocation	-	175,967	-	-	-	59,967	-	58,000	-	58,000	-
		-	1,000,000	474,098	86,843	-	191,059	-	135,500	-	112,500	-

Item No.	Details of Project	Total Estimated Cost		Expend-iture 31.12.53	Estimate 1.1.54 to 30.6.54	Estimate 1.7.54 to 30.6.55		Estimate 1.7.55 to 30.6.56		Estimate 1.7.56 to 30.6.57		Estimated Expenditure to be C/F
		F	T	T	T	F	T	F	T	F	T	
	TOURIST DEV. & ECONOMIC DEV.											
98 371	Tobacco Advisers	-	15,192	11,092	4,100	-	-	-	-	-	-	-
372	Pilot Ground Nut Scheme Mumbwa	-	80,000	63,807	6,193	-	5,000	-	5,000.	-	-	-
373	Demonstration Agric. Equip.	-	1,000	935	65	-	-	-	-	-	-	-
374	By-products plant	-	-	-	-	-	-	-	-	-	-	-
375	Kafue Flats Survey	-	21,055	21,055	-	-	-	-	-	-	-	-
376	Hydro Electric Power Invest.	60,000	-	56,960	3,040	-	-	-	-	-	-	-
377	Native Timber Experiments	-	2,000	832	168	-	350	-	350	-	300	-
378	Hydro. Electric Power Invest. Geology	30,000	-	16,019	6,981	7,000	-	-	-	-	-	-
379	Hydro Electric Power Invest. Land Surveys	10,000	-	6,592	-	3,408	-	-	-	-	-	-
380	Dev. of Fish Marketing	-	1,900	1,513	387	-	-	-	-	-	-	-
381	Tourist Office Livingstone	-	1,283	1,283	-	-	-	-	-	-	-	-
99 171	" " "	-	2,638	1,638	1,000	-	-	-	-	-	-	-
172	Rest Camps		10,100	9,472	628	-	-	-	-	-	-	-
173	Miscellaneous Works 50/51		1,353	1,353	-	-	-	-	-	-	-	-
174	" " 1952	-	237	237	-	-	-	-	-	-	-	-
175	Chief Nsefu's Game											

Item No.	Details of Project	Total Estimated Cost		Expend-iture 31.12.53	Estimate 1.1.54 to 30.6.54	Estimate 1.7.54 to 30.6.55		Estimate 1.7.55 to 30.6.56		Estimate 1.7.56 to 30.6.57		Estimated Expenditure to be C/F
		F	T	T	T	F	T	F	T	F	T	
	TOURIST DEV. & ECONOMIC DEV. (Contd)											
99 176	Miscellaneous Works 1953	-	500	500	-	-	-	-	-	-	-	-
177	Nyika Plateau Rest Camp	-	2,500	2,500	-	-	-	-	-	-	-	-
	for allocation	-	1,572	-	-	-	1,572	-	-	-	-	-
		100,000	142,430	195,999	23,451	10,408	6,922	-	5,350	-	300	-

Item No.	Details of Project	Total Estimated Cost		Expenditure 31.12.53	Estimate 1.1.54 to 30.6.54	Estimate 1.7.54 to 30.6.55		Estimate 1.7.55 to 30.6.56		Estimate 1.7.56 to 30.6.57		Expenditure to be C/F
		F	T	T	T	F	T	F	T	F	T	
	POSTS & TELEGRAPHS											
98 331	District H.Q. Radio Link (Cap.)	38,000	-	38,000	-	-	-	-	-	-	-	-
332	District H.Q. Radio Link (Rec.)	-	-	-	-	-	-	-	-	-	-	-
333	Lusaka Telephone Exch.	48,759	-	48,759	-	-	-	-	-	-	-	-
334	Mechanization Savings Banks	19,000	-	19,000	-	-	-	-	-	-	-	-
335	Rural Post Offices	55,350	-	19,066	5,934	10,350	-	10,000	-	10,000	-	-
336	Branch & New Post Offices	15,050	-	15,050	-	-	-	-	-	-	-	-
337	African Learner Schools	1,550	-	1,550	-	-	-	-	-	-	-	-
338	Additional Trunk Outlets	137,650	-	31,554	15,096	30,000	-	30,000	-	30,000	-	1,000
339	Automatic Telephone Exch.	59,000	-	59,000	-	-	-	-	-	-	-	-
340	Private Exchange Central Offices	10,000	-	10,000	-	-	-	-	-	-	-	-
341	Radio Telephone Circuit Lusaka/F.Jameson/Zomba	38,300	-	38,300	-	-	-	-	-	-	-	-
342	Telephone Installation Fort Jameson	29,000	-	24,039	4,961	-	-	-	-	-	-	-
343	Telephone Installation Abercorn	2,500	-	1,500	1,000	-	-	-	-	-	-	-
344	Telephone Installation Abercorn Rural	6,500	-	500	500	1,000	-	1,500	-	2,000	-	1,000
345	Telephone Installation Kasama	2,000	-	2,000	-	-	-	-	-	-	-	-
346	Ext. Telephone Services Mine Townships	84,000	-	7,593	3,407	25,000	-	25,000	-	23,000	-	-

Contd.-16-

Item No.	Details of Project	Total Estimated Cost		Expend-iture 31.12.53	Estimate 1.1.54 to 30.6.54	Estimate 1.7.54 to 30.6.55		Estimate 1.7.55 to 30.6.56		Estimate 1.7.56 to 30.6.57		Estimated Expenditure to be C/F
		F	T	T	T	F	T	F	T	F	T	
	POSTS & TELEGRAPHS (contd)											
98 347	Additional Wireless Stns	2,308	-	2,308	-	-	-	-	-	-	-	-
348	" cable Lusaka	7,025	-	7,025	-	-	-	-	-	-	-	-
349	Fort Jameson-Nyasaland Trunk	1,900	-	1,900	-	-	-	-	-	-	-	-
350	Re-cabling Lusaka	14,000	-	4,000	2,000	4,000	-	4,000	-	-	-	-
351	Livingstone/Vic. Falls cable	10,000	-	10,000	-	-	-	-	-	-	-	-
352	Ndola Cable. V.H.F.	14,000	-	14,000	-	-	-	-	-	-	-	-
353	New Post Office Lusaka	140,000	-	-	-	40,000	-	60,000	-	40,000	-	-
354	New Post Office B. Hill	38,000	-	-	-	28,000	-	10,000	-	-	-	-
99 71	Main Trunk Telephone Line of Rail	149,000	-	149,000	-	-	-	-	-	-	-	-
72	Lusaka-Chirundu-Salisbury Trunk	69,000	-	35,000	-	34,000	-	-	-	-	-	-
		991,892	-	539,144	32,898	172,350	-	140,500	-	105,000	-	2,000

Item No.	Details of Project	Total Estimated Cost		Expend-iture 31.12.53	Estimate 1.1.54 to 30.6.54	Estimate 1.7.54 to 30.6.55		Estimate 1.7.55 to 30.6.56		Estimate 1.7.56 to 30.6.57		Estimated Expenditure to be C/F
		F	T	T	T	F	T	F	T	F	T	
	PUBLIC WORKS (Electricity & Water).											
97 50	Lusaka No.2 Power Stn.	-	850,000	60,000	30,000	-	250,000	-	250,000	-	260,000	-
98 403	" Elect. Supply	-	578,200	375,893	62,307	-	140,000	-	-	-	-	-
99 114	" " & Water	-	100,238	100,238	-	-	-	-	-	-	-	-
		-	1,528,438	536,131	92,307	-	390,000	-	250,000	-	260,000	-
		-	1,302,800	615,313	132,487	-	185,000	-	185,000	-	185,000	-
98 402	" Water Scheme	-	500,000	161,706	58,294	-	180,000	-	100,000	-	-	-
409	" Sewerage Scheme											
404	Livingstone Victoria Falls Hydro Elec. Scheme	-	200,000	71,601	19,399	-	40,000	-	40,000	-	29,000	-
		-	3,531,238	1,384,751	302,487	-	795,000	-	575,000	-	474,000	-
	PUBLIC WORKS (Police)											
98 410	Police Stations on Copperbelt	-	180,000	155,452	24,548	-	-	-	-	-	-	-
99 106	Police Camp Wasikili	-	46,420	45,731	689	-	-	-	-	-	-	-
107	" " Luanshya Mine	-	49,736	48,549	1,187	-	-	-	-	-	-	-
115	" " Livingstone	-	26,289	26,289	-	-	-	-	-	-	-	-
		-	302,445	276,021	26,424	-	-	-	-	-	-	-

Item No.	Details of Project	Total Estimated Cost		Expend-iture 31.12.53	Estimate 1.1.54 to 30.6.54	Estimate 1.7.54 to 30.6.55		Estimate 1.7.55 to 30.6.56		Estimate 1.7.56 to 30.6.57		Estimated Expenditure to be C/F
		F	T	T	T	F	T	F	T	F	T	
	PUBLIC WORKS. (General.)											
8 406	Stores Building Prog. Lusaka & Ndola	-	134,770	50,044	29,956	-	54,770	-	-	-	-	-
9 104	" " "	-	104,786	104,786	-	-	-	-	-	-	-	-
8 412	Gov. Offices & Grounds Lusaka	-	60,215	-	-	-	-	-	60,215	-	-	-
9 109	" "	-	508,000	295,741	62,259	-	150,000	-	-	-	-	-
8 423	Aged Persons Home Ndola	-	7,750	7,750	-	-	-	-	-	-	-	-
9 111	" " "	-	25,000	25,000	-	-	-	-	-	-	-	-
9 105	Silicosis Bureau	-	47,802	47,802	-	-	-	-	-	-	-	-
108	Mental Ward Ndola	3,482	-	3,482	-	-	-	-	-	-	-	-
8 420	Samfya Development	-	51,920	42,681	9,239	-	-	-	-	-	-	-
414	Prisons	78,500	-	-	-	18,500	-	30,000	-	30,000	-	-
9 110	"	172,000	-	70,806	11,194	30,000		30,000	-	30,000	-	-
		253,982	940,243	648,092	112,648	48,500	204,770	60,000	60,215	60,000	-	-

Item No.	Details of Project	Total Estimated Cost		Expend-iture 31.12.53	Estimate 1.1.54 to 30.6.54	Estimate 1.7.54 to 30.6.55		Estimate 1.7.55 to 30.6.56		Estimate 1.7.56 to 30.6.57		Estimated Expenditure to be C/F
		F	T	T	T	F	T	F	T	F	T	
	PUBLIC WORKS DEPARTMENT											
98 401	Departmental Staff (Dev)	-	900,000	710,401	89,599	-	100,000	-	100,000	-	100,000	-
99 113	" "	-	14,981	14,981	-	-	-	-	-	-	-	-
103	P.W.D. Workshops	-	64,000	64,000	-	-	-	-	-	-	-	-
112	" Plant & Equip.	-	45,728	45,728	-	-	-	-	-	-	-	-
		-	1,224,709	835,110	89,599	-	100,000	-	100,000	-	100,000	-
	PUBLIC WORKS.. (African Housing).											
98 407	African Housing Stage 1	-	300,000	300,000	-	-	-	-	-	-	-	-
411	" " Stage 2 & 3	-	4,750,000	2,038,875	161,125	-	850,000	-	850,000	-	850,000	-
99 81	Staff & Equipment	-	23,799	23,799	-	-	-	-	-	-	-	-
82	Motor Vehicles	-	9,000	9,000	-	-	-	-	-	-	-	-
83	Plant & Machinery	-	686	686	-	-	-	-	-	-	-	-
84	Construction	-	966,515	966,515	-	-	-	-	-	-	-	-
102	Staff Housing	-	500,000	476,039	23,961	-	-	-	-	-	-	-
		-	6,550,000	3,814,914	185,086	-	850,000	-	850,000	-	850,000	-

Item No.	Details of Project	Total Estimated Cost		Expenditure 31.12.53	Estimate 1.1.54 to 30.6.54	Estimate 1.7.54 to 30.6.55		Estimate 1.7.55 to 30.6.56		Estimate 1.7.56 to 30.6.57		Estimated Expenditure to be C/F
		F	T	T	T	F	T	F	T	F	T	
	PUBLIC WORKS. (European Housing).											
98 405	European Staff Housing 50/52 Programme	-	1,000,000	990,015	9,985	-	-	-	-	-	-	-
415	European Staff Housing Lusaka	-	478,000	354,980	23,020	-	100,000	-	-	-	-	-
416	European Staff Housing Other Stations	-	572,540	478,143	21,857	-	72,540	-	-	-	-	-
417	European Staff Housing Minor Contracts	-	136,513	136,513	-	-	-	-	-	-	-	-
418	European Staff Housing Hostel Accommodation	-	486,000	313,788	-	-	166,212	-	6,000	-	-	-
419	European Staff Housing Replacements	-	320,234	317,740	-	-	2,494	-	-	-	-	-
421	European Staff Housing outside Lusaka	-	117,000	105,000	-	-	12,000	-	-	-	-	-
422	European Staff Housing Special Plan B.	-	500,000	300,096	49,904	-	100,000	-	50,000	-	-	-
424	European Staff Housing Special Plan C.	-	500,000	250,000	-	-	100,000	-	100,000	-	50,000	-
99 101	European Staff Housing	-	1,125,000	1,068,207	6,793	-	50,000	-	-	-	-	-
	Extension Plan 'C'	-	500,000	-	250,000	-	100,000	-	100,000	-	50,000	-
		-	5,735,287	4,314,482	361,559	-	703,246	-	256,000	-	100,000	-

Item No.	Details of Project	Total Estimated Cost		Expenditure 31.12.53	1.1.54 to 30.6.54	1.7.54 to 30.6.55		1.7.55 to 30.6.56		1.7.56 to 30.6.57		Balance to be C/F
		F	T	T	T	F	T	F	T	F	T	
	ROADS.											
97 40	Choma-Magoye (Class 2)	965,000	-	50,000	25,000	290,000	-	300,000	-	300,000	-	-
41	Kapiri-Mposhi-Ndola	600,000	-	26,000	14,000	180,000	-	190,000	-	190,000	-	-
98 451	Grants to District Road Boards	-	575,000	244,753	55,247	-	100,000	-	100,000	-	75,000	-
452	Mazabuka-Kafue Bridge Road (Class 1)	109,500	-	47,330	22,170	20,000	-	20,000	-	-	-	-
453	Livingstone North Approach	21,991	-	21,991	-	-	-	-	-	-	-	-
455	Broken Hill-Kapiri Mposhi	231,000	-	167,535	63,465	-	-	-	-	-	-	-
456	Great N. Road Chisamba	16,800	-	3,477	323	13,000	-	-	-	-	-	-
457	F. Rosebery-Samfya	-	16,500	-	-	-	5,500	-	5,500	-	5,500	-
458	Chingola-Solwezi	-	45,000	15,000	-	-	10,000	-	10,000	-	10,000	-
459	Kawambwa - Kasama	-	49,500	5,000	-	-	15,000	-	15,000	-	14,500	-
460	Kasama - Isoka	-	26,000	-	-	-	9,000	-	9,000	-	8,000	-
461	Investigations & Surveys	-	20,000	5,000	-	-	5,000	-	5,000	-	5,000	-
463	Livingstone-Ndola Rd. Invest.	17,898	-	17,898	-	-	-	-	-	-	-	-
464	Kabulonga	-	7,500	7,500	-	-	-	-	-	-	-	-
466	Mufulira - Ndola	-	17,896	17,896	-	-	-	-	-	-	-	-
467	Lusaka - Broken Hill	73,925	-	73,925	-	-	-	-	-	-	-	-
468	Improvements to Dis. Roads	-	150,000	10,000	10,000	-	40,000	-	50,000	-	40,000	-
469	Kafue Chirundu	555,000	-	239,411	35,589	230,000	-	-	-	-	-	-

Contd -22-

Item No.	Details of Project	Total Estimated Cost		Expenditure 31.12.53	Estimate 1.1.54 to 30.6.54	Estimate 1.7.54 to 30.6.55		Estimate 1.7.55 to 30.6.56		Estimate 1.7.56 to 30.6.57		Estimated Expenditure to be C/F
	ROADS (Contd).	F	T	T	T	F	T	F	T	F	T	
98 622	Kapiri Mposhi-Tunduma	1,250,000	-	698,918	51,082	175,000	-	175,000	-	150,000	-	-
99 42	Bitumen Copperbelt Roads	-	190,305	190,305	-	-	-	-	-	-	-	-
43	Lusaka Chirundu Recons.	276,695	-	276,695	-	-	-	-	-	-	-	-
44	Plant & Equipment	-	180,353	180,353	-	-	-	-	-	-	-	-
45	Staff	-	13,613	13,613	-	-	-	-	-	-	-	-
46	Construction 2, 3 & 4 Class	-	268,000	262,397	5,603	-	-	-	-	-	-	-
48	Bitumen other roads	-	611,000	545,781	65,219	-	-	-	-	-	-	-
49	Investigations & Surveys	-	20,000	17,687	2,313	-	-	-	-	-	-	-
	Funds for Class 1, 2, 3 & 4 roads	69,000	263,000	-	-	69,000	90,000	-	90,000	-	83,000	-
		4,.186,809	2,453,667	3,188,465	350,011	977,000	274,500	685,000	284,500	640,000	241,000	-
	BRIDGES											
47	Bridges & Culverts	99,944	50,056	108,287	21,713	7,301	3,199	6,301	3,199	-	-	-

Item No.	Details of Project	Total Estimated Cost		Expend-iture 31.12.53	Estimate 1.1.54 to 30.6.54	Estimate 1.7.54 to 30.6.55		Estimate 1.7.55 to 30.6.56		Estimate 1.7.56 to 30.6.57		Estimated Expenditure to be C/F
		F	T	T	T	F	T	F	T	F	T	
	CIVIL AVIATION											
98 462	Livingstone Airport Ext.	95,070	-	95,070	-	-	-	-	-	-	-	-
99 61	" " "	865,000	-	865,000	-	-	-	-	-	-	-	-
62	New Lusaka Airport Invest.	2,000	-	315	-	585	-	500	-	600	-	-
98 621	Aeronautical Telecom.	14,000	-	14,000	-	-	-	-	-	-	-	-
99 41	Capital C.A.A.	308,000	-	308,000	-	-	-	-	-	-	-	-
98 623	Meteorological Services	9,746	-	9,746	-	-	-	-	-	-	-	-
615	Radio Homing Beacon Mongu	10,475	-	6,882	-	1,593	-	1,000	-	1,000	-	-
		1,304,291	-	1,299,013	-	2,178	-	1,500	-	1,600	-	-

Item No.	Details of Project	Total Estimated Cost		Expenditure 31.12.53	1.1.54 to 30.6.54	1.7.54 to 30.6.55		1.7.55 to 30.6.56		1.7.56 to 30.6.57		Expenditure to be C/F
		F	T	T	T	F	T	F	T	F	T	
	DEFENCE											
97 30	Military Cantonments Bwana Mkubwa	800,000	-	50,000	-	100,000	-	150,000	-	250,000	-	250,000
	LOANS TO LOCAL AUTHORITIES											
98 590	Loans to Local Authorities	-	7,000,000	750,000	350,000	-	2,000,000	-	2,000,000	-	1,900,000	-
99 91	" " " "	-	500,000	500,000	-	-	-	-	-	-	-	-
		-	7,500,000	1,250,000	350,000	-	2,000,000	-	2,000,000	-	1,900,000	-
	CO-OP SOCIETIES											
98 591	Loans to Co-op Societies	-	100,000	28,750	11,250	-	20,000	-	20,000	-	20,000	-
99 151	Lusaka African Co-op Society	-	3,250	3,150	100	-	-	-	-	-	-	-
152	Loans allocated 1951/2	-	10,250	5,750	4,500	-	-	-	-	-	-	-
153	Kunda Valley Co-op Soc.	-	250	200	50	-	-	-	-	-	-	-
154	Loans for allocation 1953	-	6,250	6,250	-	-	-	-	-	-	-	-
		-	120,000	44,100	15,900	-	20,000	-	20,000	-	20,000	-

Item No.	Details of Project	Total Estimated Cost		Expenditure 31.12.53	1.1.54 to 30.6.54	1.7.54 to 30.6.55		1.7.55 to 30.6.56		1.7.56 to 30.6.57		To be C/F
		F	T	T	T	F	T	F	T	F	T	
	MISCELLANEOUS											
98 602	Red Locust Control Abercorn	-	67,500	66,000	1,500	-	-	-	-	-	-	-
603	Central African Broadcasting (Cap.)	-	78,100	78,100	-	-	-	-	-	-	-	-
616	Central African Broadcasting Ext. (Cap.)	-	33,750	19,444	14,306	-	-	-	-	-	-	-
619	" " " "	-	60,000	33,221	-	-	16,779	-	10,000	-	-	-
604	" " " (Rec.)	-	54,500	54,500	-	-	-	-	-	-	-	-
617	Central African Broad-Casting (Rec.)	-	17,220	1,548	-	-	8,672	-	7,000	-	-	-
620	Central African Broadcasting Ext (Rec.)	-	78,732	72,986	5,746	-	-	-	-	-	-	-
608	Publications Bureau Cap. & Rec.	-	78,849	53,882	14,967	-	5,000	-	5,000	-	-	-
609	Publications Bureau Loans to Book Dist.	-	14,300	4,000	2,300	-	4,000	-	4,000	-	-	-
610	Fisheries Research Org. N.R. & Nyasaland (Cap)	-	36,200	13,769	2,431	-	10,000	-	10,000	-	-	-
611	" " " (Rec)	-	52,800	18,387	5,413	-	11,500	-	12,500	-	5,000	-
612	Geological Survey	132,600	-	46,399	16,201	30,000	-	30,000	-	10,000	-	-
613	Rhodes-Livingstone Inst.	-	100,000	32,563	7,437	-	20,000	-	20,000	-	20,000	-
618	Socialogical Survey A.L. Epstein	-	2,266	2,266	-	-	-	-	-	-	-	-
	Completed items	-	22,912	22,912	-	-	-	-	-	-	-	-
		132,600	697,129	519,977	70,301	30,000	75,951	30,000	68,500	10,000	25,000	-

N Y A S A L A N D

D E V E L O P M E N T P L A N

1946 - 1957

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THE DEVELOPMENT PLAN

1946 - 1957

Plans for the post-war development of the Protectorate were first presented in the original Report of the Post-War Development Committee made in 1945. These plans called for a total expenditure, over a period of ten years, of £7½ million in addition to normal departmental expenditure. The allocations to be made to the various colonial territories under the Colonial Development and Welfare Act, 1945, were subsequently made known and the £2 million allocation made to Nyasaland was not a sufficient addition to the financial resources of the Protectorate to enable the plans to be fulfilled on the scale originally planned. Revision was therefore necessary in order to bring down the scale of expenditure to the level of the resources available. The results of this revision, which effected a reduction of nearly £3 million in the total estimated cost of the development programme, were published early in 1947 in the Revised Report of the Post-War Development Committee. The Revised Development programme recommended in this Report received the general approval of the Secretary of State in July, 1947. Subsequent examination of the projects in the Revised Report disclosed that many of the provisions were inadequate, and a restatement of the plan in 1948 determined its overall cost as £6,900,000.

2. There followed a period of 2 to 3 years characterised by : -

(a) absence of substantial progress in the execution of development projects involving constructional work, because of the lack of executive staff, trained artisans, material, plant and equipment;

(b) some progress in fields which did not involve appreciable constructional work, e.g. in education and soil conservation;

(c) a drought and major crop failure which caused a disastrous set-back to the whole economy of the territory.

3. In 1950 the Development Programme was again revised. This revision aimed at correcting the set-backs of the preceding years as far as financial resources then permitted. At the time it was thought that revenue prospects were encouraging although events have proved this view to be incorrect. Additional capital resources had been secured in the form of a further Colonial Development and Welfare allocation of £500,000 and authority to raise in London a development loan of up to £3,000,000, (which has since been increased to £4½ million) In the revised programme provision was made for fundamental public utilities such as improved roads, electricity services, water supply, postal services and telecommunications, and greater priority was given in the Development Programme to economic as opposed to social welfare projects.

/Apart from ...

Apart from loan works the programme itself was not appreciably expanded. Provision had to be made however for increased costs and in figures the programme amounted to a total of £12,500,000 of which £3,000,000 was to come from loan, approximately £3,000,000 from the Colonial Development and Welfare Fund and the balance, over the period 1946 to 1956, from territorial resources.

4. The year following that revision saw the first of a series of economy drives necessitated by : -

(a) large increases in the costs of material, equipment, plant and services;

(b) a contraction in ordinary revenue.

As a result the programme has in successive twice-yearly or annual reviews been pared of works which would not help in the long run to strengthen the territory's revenues, and medical, education and other social services have suffered in consequence.

5. As a result of the 1950 revision valuable progress has however been made on the following lines : -

1) The loan works to provide minimum public utilities have been almost completed.

2) A considerable advance has been made in agricultural production and instead of importing grain, as had to be done in 1950, African production has been built to a level which yields surpluses for export.

3) Plantations of softwoods have been put down which will provide timber for export and will be revenue earning.

6. In addition a sum of money totalling £1 million has been made available to the Nyasaland and Trans-Zambesia Railways to finance the first instalment of a further programme of capital development.

7. The schedules which follow represent a drawing together of:-

(a) projects not started because of the circumstances described above;

(b) projects started but not completed for the same reason;

(c) continuation work on projects at present in course of implementation;

(d) projects for further development and to supply deficiencies in the existing programme.

/ It should ....

It should however be emphasised that the Protectorate's development plans also included provision for the stepping up of many services which are of a recurrent rather than a capital nature. Thus, in the first six years of the plan, over £¾ million have been spent on the expansion of agricultural, veterinary and forestry services, and another £1 million on the development of educational and medical services. This rate of expenditure will continue, and increase, during the remainder of the period of the plan; but the following schedules, relating to items of a capital nature, do not take account of this.

8. The programme details federal and territorial projects. It has been related to works capacity taking into account the contractors at present available in the territory and the Public Works Department. As regards the latter certain expansions are in contemplation which themselves depend upon the acceptance of the programme as a whole coupled with a decision that the Federal Government will itself employ the Public Works Department on projects within its purview for which contractors would not be available or suitable. As regards contractors two important firms are at present engaged on major projects which are nearing completion. It is not expected that any difficulty would be experienced under Federation in attracting other firms to the territory; but it is important that the existing firms be given enough work to carry on, and it is most undesirable that there should be any hiatus in the programme. The projects for which these contractors would be used are all such as would become Federal responsibilities.

9. Notes on the Federal items in the Plan are appended to the Schedules.

ZOMBA

25TH JULY 1953

Item No.	Details of Project	Total Estimated Cost		Actual Expenditure 31.12.52	Estimate 1.1.53 to 30.6.54	Estimate 1.7.54 to 30.6.55		Estimate 1.7.55 to 30.6.56		Estimate 1.7.56 to 30.6.57		Estimated Expenditure to be c/f
	ECONOMIC DEVELOPMENT SERVICES	F	T	T	T	F	T	F	T	F	T	
	AGRICULTURE & IRRIGATION											
1	Agricultural Research Station Lilongwe (1)	-	145,700	76,200	22,800	-	17,200	-	19,500	-	10,000	-
2	Cotton Experimental Station Lower River	-	50,000	-	-	-	-	-	-	-	50,000	-
3	Equipment & Buildings Experimental Station	-	15,000	-	-	-	5,000	-	5,000	-	5,000	-
4	Dam Building Unit	-	25,000	-	-	-	-	-	25,000	-	-	-
5	Fencing Material	-	10,000	-	-	-	2,000	-	2,000	-	2,000	4,000
6	Chilwa Rice Pilot Project (1)	-	25,700	-	-	-	18,100	-	3,800	-	3,800	-
7	Agricultural & Veterinary Training School Lilongwe(2)	-	37,000	-	26,000	-	11,000	-	-	-	-	-
8	Hydrological Survey (3)	75,000	-	-	-	19,000	-	19,000	-	19,000	-	18,000
	Totals c/f	75,000	308,400	76,200	48,800	19,000	53,300	19,000	55,300	19,000	70,800	22,000

(1) Financed from C.D.W. Vote (2) To be financed from C.D.W. Vote (3) See Appendix page 1.

Item No.	Details of Project	Total Estimated Cost		Actual Expenditure 31.12.52	Estimate 1.1.53 to 30.6.54	Estimate 1.7.54 to 30.6.55		Estimate 1.7.55 to 30.6.56		Estimate 1.7.56 to 30.6.57		Estimated Expenditure to be C/F
		F	T	T	T	F	T	F	T	F	T	
	B/F	75,000	308,400	76,200	48,800	19,000	53,300	19,000	55,300	19,000	70,800	22,000
9	Shire Valley Project Survey (1)	-	359,300	182,800	176,500	-	-	-	-	-	-	-
10	Shire Valley Hydro-Electrical & Irrigation Scheme (First Stage)(2)											
	(a) Construction of Barrage	500,000	-	-	-	50,000	-	150,000	-	150,000	-	150,000
	(b) Hydro-Electric Scheme with flood storage & transmission	10,500,000	-	-	-	-	-	-	-	100,000	-	10,400,000
	(c) Pilot Irrigation Schemes	70,000	-	-	-	30,000	-	2,000	-	38,000	-	-
	Total c/f	11,145,000	667,700	259,000	225,300	99,000	53,300	171,000	55,300	307,000	70,800	10,572,000

(1) Partly financed from C.D.W. Vote and Portuguese contribution

(2) See Appendix page 2

Item No	Details of Project	Total Estimated Cost		Actual Expenditure 31.12.52	Estimate 1.1.53 to 30.6.54	Estimate 1.7.54 to 30.6.55		Estimate 1.7.55 to 30.6.56		Estimate 1.7.56 to 30.6.57		Estimated Expenditure to be C/F
		F	T	T	T	F	T	F	T	F	T	
	B/F	11,145,000	667,700	259,000	225,300	99,000	53,300	171,000	55,300	307,000	70,800	10,572,000
	VETERINARY											
11	Livestock Improvement Centres, Capital Development.	-	17,000	-	-	-	5,000	-	5,000	-	5,000	2,000
12	New Livestock Improvement Centre, Karonga	-	10,000	-	-	-	3,000	-	3,000	-	2,000	2,000
13	Central Abattoir Blantyre/Limbe	-	17,500	-	-	-	10,000	-	5,000	-	2,500	-
14	Extension of Dipping Services Mzimba/Kasungu	-	33,000	-	-	-	7,000	-	7,000	-	7,000	12,000
15	Poultry Development Scheme	-	4,500	-	-	-	1,500	-	1,500	-	1,500	-
16	Ranching Scheme Palombe Plain	-	25,000	-	-	-	10,000	-	5,000	-	5,000	5,000
17	Training Centres Mbawa & Mikolongwe (1)	-	7,400	-	-	-	7,400	-	-	-	-	-
	Total c/f	11,145,000	782,100	259,000	225,300	99,000	97,200	171,000	81,800	307,000	93,800	10,593,000

(1) To be financed from C.D.W. Vote

Item No.	Details of Project	Total Estimated Cost		Actual Expenditure 31.12.52	Estimate 1.1.53 to 30.6.54	Estimate 1.7.54 to 30.6.55		Estimate 1.7.55 to 30.6.56		Estimate 1.7.56 to 30.6.57		Estimated Expenditure to be C/F
		F	T	T	T	F	T	F	T	F	T	
	B/F	11,145,000	782,100	259,000	225,300	99,000	97,200	171,000	81,800	307,000	93,800	10,593,000
	FORESTRY											
18	Mudi Dam Afforestation Scheme (1)	-	65,800	-	45,800	-	5,000	-	5,000	-	5,000	46,000
19	Forestry Equipment (1)	-	15,600	-	15,600	-	-	-	-	-	-	-
20	Utilisation Depots (1)	-	54,400	-	14,400	-	20,000	-	20,000	-	-	-
21	Softwood Afforestation Scheme	-	923,600	-	-	-	28,000	-	90,900	-	137,700	667,000
22	Silvicultural Research Station	-	11,000	-	-	-	7,000	-	2,000	-	2,000	-
23	Forest Roads	-	20,000	-	-	-	5,000	-	5,000	-	5,000	5,000
	Total c/f	11,145,000	1,872,500	259,000	260,100	99,000	162,200	171,000	204,700	307,000	243,500	11,311,000

(1) Financed from C.D.W. Vote

Item No.	Details of Project	Total Estimated Cost		Actual Expenditure 31.12.52	Estimate 1.1.53 to 30.6.54	Estimate 1.7.54 to 30.6.55		Estimate 1.7.55 to 30.6.56		Estimate 1.7.56 to 30.6.57		Estimated Expenditur to be c/f
		F	T	T	T	F	T	F	T	F	T	
	B/F	11,145,000	1,872,000	259,000	260,100	99,000	162,200	171,000	204,700	307,000	243,500	11,311,000
	ELECTRICAL SERVICES											
24	Limbe-Blantyre (1)	20,000	700,000	424,000	276,000	20,000	-	-	-	-	-	-
25	Zomba	35,000	95,000	58,200	36,800	-	-	5,000	-	10,000	-	20,000
26	Lilongwe	30,000	30,000	24,800	5,200	5,000	-	10,000	-	10,000	-	5,000
27	District Plant	10,000	17,500	5,300	12,200	10,000	-	-	-	-	-	-
28	P.W.D. Overheads	-	12,300	8,300	4,000	-	-	-	-	-	-	-
29	Working Capital	-	92,300	22,100	70,200	-	-	-	-	-	-	-
30	Transport & Tools	12,000	-	-	-	1,000	-	4,000	-	3,000	-	4,000
31	Meters & Services	5,000	-	-	-	1,000	-	-	-	1,000	-	3,000
	WATER SUPPLIES											
32	Limbe Blantyre	-	520,000	328,500	191,500	-	-	-	-	-	-	-
33	Lilongwe	-	66,200	5,000	61,200	-	-	-	-	-	-	-
34	District Schemes	-	106,000	39,400	15,100	-	31,500	-	10,000	-	10,000	-
35	Zomba	-	26,400	1,600	14,800	-	10,000	-	-	-	-	-
36	New Drilling Unit Northern Province	-	51,900	-	-	-	21,000	-	10,300	-	10,100	10,500
	Totals c/f	11,257,000	3,590,100	1,176,200	947,100	136,000	224,700	190,000	225,000	331,000	263,600	11,353,500

(1) Failing implementation of Shire Valley Hydro-Electric Scheme (vide item 10 (b)) additional plant will be required towards the end of period.

Item No.	Details of Project	Total Estimated Cost		Actual Expenditure 31.12.52	Estimate 1.1.53 to 30.6.54	Estimate 1.7.54 to 30.6.55		Estimate 1.7.55 to 30.6.56		Estimate 1.7.56 to 30.6.57		Estimated Expenditure to be c/f
		F	T	T	T	F	T	F	T	F	T	
	B/F	11,257,000	3,590,100	1,176,200	947,100	136,000	224,700	190,000	225,000	331,000	263,600	11,353,500
	GAME, FISH & TSETSE CONTROL											
37	Tsetse Survey (1)	-	22,900	18,400	4,500	-	-	-	-	-	-	-
38	Fishery Research (1)	-	30,200	2,300	19,400	-	3,100	-	2,700	-	2,700	-
39	Establishment of Fish Farms	-	20,300	-	-	-	-	-	10,600	-	6,700	3,000
40	Model Fishery	-	4,000	-	-	-	3,000	-	500	-	500	-
	GEOLOGICAL											
41	Mineralogical Survey(1)	22,500	26,500	16,500	10,000	10,800	-	11,700	-	-	-	-
42	Investigation of Coal Deposits	45,000	55,000	55,000	-	15,000	-	15,000	-	15,000	-	-
	TOTAL ECONOMIC DEVELOPMENT	11,324,500	3,749,000	1,268,400	981,000	161,800	230,800	216,700	238,800	346,000	273,500	11,356,500

(1) Financed from C.D.W. Vote.

Item No.	Details of Project	Total Estimated Cost		Actual Expenditure 31.12.52	Estimate 1.1.53 to 30.6.54	Estimate 1.7.54 to 30.6.55		Estimate 1.7.55 to 30.6.56		Estimate 1.7.56 to 30.6.57		Estimated Expenditure to be c/f
		F	T	T	T	F	T	F	T	F	T	
	COMMUNICATIONS ROADS											
43	Lilongwe - Fort Jameson (1)	250,000	8,500	8,500	-	10,000	-	120,000	-	120,000	-	-
44	Lilongwe-Salima(1)	990,000	10,000	-	10,000	220,000	-	250,000	-	250,000	-	270,000
45	Zomba - Limbe - Luchenza (1)	-	1,180,800	710,800	470,000	-	-	-	-	-	-	-
46	Luchenza - Mlanje - Portuguese Border (1)	430,000	130,000	-	130,000	200,000	-	150,000	-	80,000	-	-
47	Surveys & Contract Documents (1)	-	50,000	-	50,000	-	-	-	-	-	-	-
48	Reconstruction, other inter-territorial roads. (1)	1,000,000	21,300	15,300	6,000	20,000	-	100,000	-	100,000	-	780,000
49	Territorial Roads(2)	-	1,250,000	47,900	77,300	-	100,000	-	100,000	-	100,000	824,800
	Total C/F	2,670,000	2,650,600	782,500	743,300	450,000	100,000	620,000	100,000	550,000	100,000	1,874,800

(1) See Appendix pp 11-15

(2) To be financed from C.D.W. Vote

ITEM NO.	DETAILS OF PROJECT	TOTAL ESTIMATED COST		ACTUAL EXPENDITURE 31.12.52	ESTIMATE 1.7.54 TO 30.6.54	ESTIMATE 1.7.55 TO 30.6.55		ESTIMATE 1.7.55 TO 30.6.56		ESTIMATE 1.7.56 TO 30.6.57		ESTIMATED EXPENDITURE TO BE c/f
		F	T	T	T	F	T	F	T	F	T	
	B/F :	2,670,000	2,650,600	782,500	743,300	450,000	100,000	620,000	100,000	550,000	100,000	1,874,800
	CIVIL AVIATION :											
50	Chileka Airport (1)	127,000	178,500	179,300	8,200	20,000	-	57,000	-	50,000	-	-
51	Salima Airport (1)	390,000	10,000	-	10,000	150,000	-	150,000	-	90,000	-	-
52	Lilongwe Airport (1)	420,000	-	-	-	-	-	-	-	-	-	420,000
53	H.Q. Meteorological Station (2)	-	3,000	-	3,000	-	-	-	-	-	-	-
54	Meteorological Equipment (2)	-	48,700	300	48,400	-	-	-	-	-	-	-
55	Aeronautical Telecommunications (2)	-	30,000	11,700	18,300	-	-	-	-	-	-	-
56	Zomba Airfield	15,000	-	-	-	-	-	10,000	-	5,000	-	-
57	District Airfields	36,000	-	-	-	-	-	2,000	-	7,000	-	27,000
	TOTAL C/F :	3,658,000	2,920,800	964,800	831,200	620,000	100,000	839,000	100,000	702,000	100,000	2,321,800

(1) See Appendix pp. 16 - 18

(2) Financed from C.D.W. Vote.

ITEM NO.	DETAILS OF PROJECT	TOTAL ESTIMATED COST		ACTUAL EXPENDITURE 31.12.52	ESTIMATE 1. 1.53 TO 30. 6.54	ESTIMATE 1. 7.54 TO 30. 6.55		ESTIMATE 1. 7.55 TO 30. 6.56		ESTIMATE 1. 7.56 TO 30. 6.57		ESTIMATED EXPENDITURE TO BE c/f
		F	T	T	T	F	T	F	T	F	T	
	B/F :	3,658,000	2,920,800	964,800	831,200	620,000	100,000	839,000	100,000	702,000	100,000	2,321,800
	RAILWAYS AND LAKE SERVICE:											
58	Nyasaland and Central African Railways Capital Requirements	952,000	30,500	-	30,500	393,100	-	193,500	-	241,600	-	123,800
59	Trans-Zambesi Railway, Capital Requirements	904,800	53,000	-	53,000	297,600	-	317,800	-	209,000	-	80,400
60	New Vessel for Lake Service	250,000	-	-	-	-	-	250,000	-	-	-	-
61	Further Railway Development	2,000,000	-	-	-	2,000,000	-	-	-	-	-	-
	TOTAL C/F :	7,764,800	3,004,300	964,800	914,700	3,310,700	100,000	1,600,300	100,000	1,152,600	100,000	2,526,000

A memcrandum on the requirements of the Railways and Lake Service will be separately submitted.

ITEM NO.	DETAILS OF PROJECT	TOTAL ESTIMATED COST		ACTUAL EXPENDITURE 31.12.52	ESTIMATE 1. 1.53 TO 30. 6.54	ESTIMATE 1. 7.54 TO 30. 6.55		ESTIMATE 1. 7.55 TO 30. 6.56		ESTIMATE 1. 7.56 TO 30. 6.57		ESTIMATED EXPENDITURE TO BE c/f
		F	T	T	T	F	T	F	T	F	T	
62	HARBOUR DEVELOPMENT:(1) B/F	7,764,800	3,004,300	964,800	914,700	3,310,700	100,000	1,600,300	100,000	1,152,600	100,000	2,526,000
	(a) Surveys	-	10,000	-	10,000	-	-	-	-	-	-	-
	(b) Wharf Construction	90,000	-	-	-	30,000	-	30,000	-	30,000	-	-
	POSTS AND TELE-COMMUNICATIONS : (1)											
63	(a) First Phase 1946-1953	-	650,000	444,300	205,700	-	-	-	-	-	-	-
64	(b) Second Phase 1954-1959											
	(i) Engineering Equipment	555,600	-	-	-	× 165,300	-	110,700	-	99,000	-	180,600
	(ii) Postal Development	32,000	-	-	-	14,500	-	5,200	-	6,000	-	6,300
	(iii) Office Furniture and Equipment	4,700	-	-	-	1,000	-	1,000	-	900	-	1,800
	(iv) Staff	100,000	-	-	-	20,000	-	20,000	-	20,000	-	40,000
	(v) Purchase of Vehicles, etc.	27,900	-	-	-	16,100	-	8,200	-	2,000	-	1,600
	(vi) Postal and Engineering Buildings	214,100	-	-	-	18,500	-	86,000	-	77,600	-	32,000
	(vii) Telegraphs	18,200	-	-	-	4,500	-	3,600	-	4,100	-	6,000
	(viii) Air Transport	1,600	-	-	-	1,600	-	-	-	-	-	-
	TOTAL COMMUNICATIONS :	8,808,900	3,664,300	1,409,100	1,130,400	3,582,200	100,000	1,865,000	100,000	1,392,200	100,000	2,794,300

(1) See Appendix pp. 19-21.

ITEM NO.	DETAILS OF PROJECT	TOTAL ESTIMATED COST		ACTUAL EXPENDITURE 31.12.52	ESTIMATE 1. 1.53 TO 30. 6.54	ESTIMATE 1. 7.54 TO 30. 6.55		ESTIMATE 1. 7.55 TO 30. 6.56		ESTIMATE 1. 7.56 TO 30. 6.57		ESTIMATED EXPENDITURE TO BE c/f
		F	T	T	T	F	T	F	T	F	T	
	SOCIAL SERVICES EDUCATION,											
	AFRICAN :											
65	Secondary School Dedza	-	113,300	54,600	18,700	-	20,000	-	20,000	-	-	-
66	Extensions, Secondary School, Blantyre	-	77,500	-	-	-	23,200	-	28,700	-	17,600	8,000
67	Secondary School, Northern Province	-	75,000	-	-	-	32,300	-	20,600	-	14,100	8,000
68	Trade Training Centre Mpemba (1)	-	23,200	-	5,100	-	7,500	-	5,100	-	5,500	-
69	Teachers' Housing, Southern Province	-	92,000	-	-	-	23,000	-	23,000	-	23,000	23,000
	EUROPEAN :											
70	Extensions St. Andrew's School, Blantyre (2)	94,300	-	-	-	69,400	-	4,500	-	20,400	-	-
71	Extensions, Zomba Primary School	6,500	-	-	-	5,000	-	1,500	-	-	-	-
	TOTAL C/F :	100,800	381,000	54,600	23,800	74,400	106,000	6,000	97,400	20,400	60,200	39,000

(1) To be financed from C.D.W. vote.

(2) See Appendix p. 22.

ITEM NO.	DETAILS OF PROJECT	TOTAL ESTIMATED COST		ACTUAL EXPENDITURE 31.12.52	ESTIMATE 1.1.53 TO 30.6.54	ESTIMATE 1.7.54 TO 30.6.55		ESTIMATE 1.7.55 TO 30.6.57		ESTIMATE 1.7.56 TO 30.6.57		ESTIMATED EXPENDITURE TO BE c/f
		F	T	T	T	F	T	F	T	F	T	
	B/F :	100,800	381,000	54,600	23,800	74,400	106,000	6,000	97,400	20,400	60,200	39,000
72	New Primary School, Mzuzu	10,000	-	-	-	5,000	-	5,000	-	-	-	-
73	Extensions Lilongwe Primary School (1)	33,900	-	-	-	2,500	-	21,000	-	3,000	-	7,400
74	EURASIAN : Extensions Chichiri School	17,500	-	-	-	9,000	-	3,500	-	3,000	-	2,000
75	ASIAN : Extensions, Blantyre School	8,300	-	-	-	4,800	-	800	-	2,700	-	-
76	Extensions, Limbe School	10,500	-	-	-	7,400	-	3,100	-	-	-	-
77	Extensions, Zomba School	3,800	-	-	-	-	-	2,900	-	900	-	-
78	Extensions, Port Herald School	2,400	-	-	-	-	-	1,000	-	900	-	500
79	Extensions, Lilongwe School	2,300	-	-	-	1,000	-	900	-	-	-	400
80	Extensions, Dedza School	6,200	-	-	-	2,900	-	1,400	-	500	-	1,400
81	Higher Education (All Races) (1)	98,000	2,500	-	2,500	17,000	-	33,600	-	47,400	-	-
	TOTAL C/F :	293,700	383,500	54,600	26,300	124,000	106,000	79,200	97,400	78,800	60,200	50,700

(1) See Appendix pp. 22 - 24.

ITEM NO.	DETAILS OF PROJECT	TOTAL ESTIMATED COST		ACTUAL EXPENDITURE 31.12.52	ESTIMATE 1.1.53 TO 30.6.54	ESTIMATE 1.7.54 TO 30.6.55		ESTIMATE 1.7.55 TO 30.6.56		ESTIMATE 1.7.56 TO 30.6.57		ESTIMATE EXPENDITURE TO BE c/f
		F	T	T	T	F	T	F	T	F	T	
	B/F :	293,700	383,500	54,600	26,300	124,000	106,000	79,200	97,400	78,800	60,200	50,700
	PUBLIC HEALTH :											
82	Leprosy Settlement, Kocira (1)	42,500	35,500	-	35,500	23,500	-	9,500	-	9,500	-	-
83	Group Hospital, Blantyre (1)	720,000	30,000	-	30,000	220,000	-	250,000	-	250,000	-	-
84	Mental Hospital, Zomba (2)	12,900	63,100	52,100	11,000	12,900	-	-	-	-	-	-
85	Improvements and Extensions to Existing Hospitals	86,000	-	-	-	35,000	-	31,000	-	16,500	-	3,500
86	Improvements, Training Schools	4,500	-	-	-	2,500	-	2,000	-	-	-	-
87	Rehabilitation, Existing Rural Dispensaries	28,500	-	-	3,000	7,000	-	10,000	-	5,000	-	3,500
88	New Rural Dispensaries	15,000	-	-	-	-	-	-	-	7,500	-	7,500
89	New Health Units	20,000	-	-	-	-	-	10,000	-	10,000	-	-
90	Enviromental Hygiene Teams	12,600	-	-	-	-	-	6,300	-	6,300	-	-
91	Purchase of Lorries, Ambulances, etc.	7,800	-	-	-	7,800	-	-	-	-	-	-
92	New Central Medical Stores	30,000	-	-	-	-	-	-	-	15,000	-	15,000
	TOTAL SOCIAL SERVICES :	1,270,500	515,100	106,700	105,800	432,700	106,000	398,000	97,400	398,600	60,200	80,200

(1) See Appendix pp. 25 - 28. (2) Financed from C.D.W. Vote.

ITEM NO.	DETAILS OF PROJECT	TOTAL ESTIMATED COST		ACTUAL EXPENDITURE 31.12.52	ESTIMATE 1.1.53 TO 30. 6.54	ESTIMATE 1.7.54 TO 30.6.55		ESTIMATE 1.7.55 TO 30.6.56		ESTIMATE 1.7.56 TO 30.6.57		ESTIMATED EXPENDITURE TO BE c/f
		F	T	T	T	F	T	F	T	F	T	
	ADMINISTRATIVE SERVICES :											
93	European Staff Housing (1)	150,000	1,117,200	667,200	150,000	50,000	100,000	50,000	100,000	50,000	100,000	-
94	African Staff Housing (1) (2)	120,000	666,300	300,300	126,000	40,000	80,000	40,000	80,000	40,000	80,000	-
95	Town Planning (1)	49,000	45,000	5,000	40,000	17,000	-	19,500	-	12,500	-	-
96	New Provincial H.Q. N. Province	44,000	170,300	-	22,000	12,500	44,800	8,500	62,000	23,000	31,000	10,500
97	New Provincial and District Offices and Improvements and Extensions, Existing Offices	-	100,000	-	-	-	20,000	-	20,000	-	20,000	40,000
98	Nkata Bay Township	-	73,900	14,900	29,000	-	30,000	-	-	-	-	-
99	Customs Warehouse (1)	30,000	-	-	-	30,000	-	-	-	-	-	-
100	K.A.R. Barracks (1)	724,500	25,500	-	25,500	124,500	-	150,000	-	150,000	-	300,000
101	New Office Accommodation Blantyre	-	50,000	-	-	-	-	-	-	-	25,000	25,000
102	Improvements and Extensions, Central District Prisons	18,100	-	-	-	10,300	-	6,800	-	1,000	-	-
103	Geogical Survey H.Q., Blantyre	-	15,000	-	15,000	-	-	-	-	-	-	-
104	P.W.D. H.Q., Zomba	-	15,000	-	15,000	-	-	-	-	-	-	-
105	Medical H.Q., Zomba	3,000	-	-	-	3,000	-	-	-	-	-	-
106	Loans to Municipalities	-	250,000	-	-	-	50,000	-	100,000	-	100,000	-
	TOTAL ADMINISTRATIVE SERVICES :	1,138,600	2,528,200	987,400	422,500	287,300	324,800	274,800	362,000	276,500	356,000	375,500

(1) See Appendix 1. pp. 29 - 34.

(2) To be partly financed from C.D.W. Vote.

SUMMARY.

	TOTAL ESTIMATED COST		ACTUAL EXPENDITURE 31.12.52	ESTIMATE 1.1.53 TO 30.6.54	ESTIMATE 1.7.54 TO 30.6.55		ESTIMATE 1.7.55 TO 30.6.56		ESTIMATE 1.7.56 TO 30.6.57		ESTIMATED EXPENDITURE TO BE c/f
	F	T	T	T	F	T	F	T	F	T	
Economic Development	11,324,500	3,749,000	1,268,400	981,000	161,800	230,800	216,700	238,800	346,000	273,500	11,356,500
Communications	8,808,900	3,684,300	1,409,100	1,130,400	3,582,200	100,000	1,865,000	100,000	1,392,200	100,000	2,794,300
Social Services	1,270,500	515,100	106,700	105,800	432,700	106,000	398,000	97,400	398,600	60,200	80,200
Administrative Services	1,138,600	2,528,200	987,400	422,500	287,300	324,300	274,800	362,000	276,500	356,000	375,500
TOTAL :	22,542,500	10,456,600	3,771,600	2,639,700	4,464,000	761,600	2,754,500	798,200	2,413,300	789,700	14,606,500

~~18.~~

APPENDIX CONTAINING EXPLANATORY NOTES

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HYDROLOGICAL SURVEY.

A token figure of £75,000 appears in the Development Plan. This figure has been derived from a plan prepared by the departmental officer concerned for territory-wide hydrological services.

2. The estimate and the plan must be regarded as provisional at the present stage because the whole of the hydrological services of the Nyasaland Government are at present seconded for work with the Consulting Engineers Messrs. Halcrow & Partners on the Shire Valley Project Survey. For the purposes of the Survey hydrological investigations are being made from the south to the extreme north of the territory. At present it is not possible to state:

(a) the degree to which those investigations will have to be extended for the Survey purposes;

(b) the extent of the hydrological services which will have to be maintained after the completion of the scheme for the purpose of operating the scheme itself which is based on the measurement of waters discharging into the River Shire and Lake Nyasa;

(c) the extent to which hydrological services maintained for the Shire Valley Scheme itself would have to be supplemented to provide data for localised agricultural development projects.

3. Hydrological services on an adequate scale are recognised as essential for the growing of food in the future in adequate quantities to feed the increasing population. For this reason it is thought that provision of the order indicated should be made in the programme pending a study by experts of the points mentioned in paragraph 2 above.

4. Government's Water Development Engineer is at present in consultation with Messrs. Halcrow and Partners with the object of evolving a scheme for hydrological survey which will meet the needs of the Consulting Engineers in respect of continuation work on the Shire Valley Project.

SHIRE VALLEY PROJECT.

1. The Scope of the Survey.

1. The waters of Lake Nyasa have their natural outlet in the Shire River which in turn flows into the Zambesi River. From the lake outlet to the southern boundary of Nyasaland the Shire River traces a course of some 220 miles, falling from 1,500 to 120 feet above mean sea level. The greater portion of this fall is concentrated in a 50 mile central section which consists of a series of falls and rapids. The remainder of its course in Nyasaland is through broad, low-lying valleys, considerable portions of which are subject to seasonal flooding.

2. Both Lake Nyasa and the Shire River are of great importance in the economic development of Nyasaland but the vagaries of their behaviour have in the past made it impossible to secure the benefits which might otherwise have been obtained from their use. For many years the Government of Nyasaland has had under consideration the possibility of artificial stabilisation or control of the level of the lake and the use of the waters of the Shire River for the production of hydro-electric power and for irrigation of lands in the Lower Shire Valley.

3. In 1944 Dr. Kathnak of Johannesburg investigated the problems involved in the control of the lake level and in 1946 Professor Debenham of Cambridge University paid a short visit to Nyasaland and made a further examination of the position. In the same year Mr. A.E.Griffin, late Director of Irrigation in the Sudan, made a preliminary survey of the lake and river which provided a valuable indication of the problems which would arise and the nature and extent of the further investigations which would be necessary before a scheme could be formulated.

4. As a result of these investigations the Nyasaland Government appointed an Irrigation Engineer in 1948 to carry out a general survey on the lines recommended. The survey showed that control of the waters of the lake and river was feasible and that these waters had great economic potentialities both from the point of view of the production of hydro-electric power and for irrigation. As a result of this work the Nyasaland Government decided in 1951 to appoint the firm of Consulting Engineers, Sir William Halcrow and Partners, to undertake a full-scale survey to cover all aspects of the project - planning, engineering, economic and financial.

5. The whole project may be broadly divided into three main parts as follows:-

(1) The control of the level of Lake Nyasa and the supply of water to the Shire River by the erection of a barrage on the Upper Shire.

(2) The use of the Middle Shire for generation of hydro-electric power.

(3) Irrigation and reclamation of large areas of land mainly in the Lower Shire Valley.

6. In making their recommendations regarding the general objects outlined in paragraph 5, the Consulting Engineers will make specific recommendations regarding the feasability of schemes for:-

(1) Regulating the outflow of water from Lake Nyasa so as to prevent as far as practicable

recurrences/.....

recurrences of flood and drought conditions in the upper and lower reaches of the Shire River.

(2) Stabilising Lake Nyasa so far as is consonant with sub-paragraph (1) above at a level not exceeding the maximum level reached during 1937 in order to minimise the flooding of agricultural land and in order to make practicable the provision of landing facilities for lake-borne traffic.

(3) Producing hydro-electric power at an economic rate for industries in Nyasaland (particularly in the Limbe-Blantyre area) and for agricultural and irrigation purposes.

(4) Reclaiming and draining for agricultural use the swamp lands and flood plains adjoining the upper and lower reaches of the Shire River.

(5) Irrigating the lands lying between the areas mentioned in sub-paragraph (4) above and the foot-hills bordering them.

(6) Rendering the upper and lower reaches of the Shire River navigable by shallow draft steamers.

7. In order to make these recommendations it has been agreed that it will be necessary for the following detailed surveys to be undertaken:-

(1) Land surveys extending (a) in a north-south direction from the southern end of Lake Nyasa to the Portuguese border south of Port Herald and so far as is necessary towards the confluence of the Shire and Zambesi Rivers, (b) in an east-west direction from foothill to foothill bordering the river plain.

(2) A hydrographical survey of the Shire River throughout its length and of the southern end of Lake Nyasa.

(3) A hydrological survey of the Shire Valley.

(4) A soil survey of the land bordering the upper and lower reaches of the Shire Valley.

(5) An entomological survey of the Shire Valley.

(6) A geological survey (including the necessary borings) for projected dam and control weir sites, canal alignments etc.

8. The original estimated date for the completion of the survey given by the Consulting Engineers was mid-1953. It is not now, however, expected that the Consulting Engineers report will be received until mid-1954.

II. <u>The Cost of the Survey</u>.

9. The estimated cost of the survey when the scheme was first prepared was £300,000 of which half was to be paid by a grant from Colonial Development and Welfare Funds.

A/.....

A revised estimate of cost has recently been received from the Consulting Engineers and this is shown in the following table:-

	Actual Expenditure to 31.12.53 £	Estimated Expenditure 1953 £	Estimated Expenditure 1954 £	Total Estimated Expenditure £
ield Survey	149,391	68,958	37,820	256,169
ydrological Survey	17,958	31,349	10,450	59,757
oil Survey	3,664	10,336	-	14,000
eological Survey	-	7,800	-	7,800
lectrical Consultant	-	2,000	-	2,000
ut of pocket expenses	540	1,504	1,712	2,756
ir Survey	-	1,870	-	1,870
onsultant's Fee	11,250	3,000	750	15,000
TOTAL	182,803	125,817	50,732	359,352

III. Progress of the Survey.

10. The progress so far achieved in the survey may be summarised as follows:-

(1) Field Survey.

On the upper river contouring up to five feet above the 1937 flood level at Fort Johnston has been extended about seven miles south of Lake Malombe. A traverse upstream from Liwonde on the right bank has progressed about six miles. It is expected that the contouring of this stretch will be completed during the present dry season. Echo soundings between Lake Nyasa and Malombe have been completed and about two-thirds of Lake Malombe has also been sounded. Echo sounding as far downstream as Liwonde should be completed during the dry season. Borings are taking place at a number of possible sites for the barrage which will control the outflow of Lake Nyasa.

On the middle river contouring and levelling has been carried out which will link up with the conouring now proceeding southwards from Liwonde on the upper river northwards from Chiromo on the lower river. Several hydro-electric sites have been surveyed in some detail and topographical surveys of the Mpatamanga and Hamilton Falls sites have been made. Boring has been conducted at Mpatamanga and contours of the reservoir area are being plotted from air photographs by the Directorate of Colonial Surveys. Investigation of a further site at Nkula has begun.

On the lower river contouring and echo sounding have been carried northward from Chiromo and are expected to reach the foot of the rapids during the present dry season. Work will then start southwards from Chiromo towards Port Herald. A reconnaissance has also been made of the right bank of the river from Hamilton Falls to Chikwawa in preparation for a survey of that area. This will be part

of/....

of the contour survey of the lower river area to assist in the reclamation and development of the flooded land. A preliminary survey has also been carried out on the Chikonjo Estate where a pilot irrigation scheme is proposed.

(2) Hydrological Survey.

In August, 1952, the Water Development Branch of the Agricultural Department was seconded to the Consulting Engineers for full time work in connection with the survey. Since that time more consistent results have been obtained for the discharges of the Shire and some of its main tributaries.

Evaporating pans have been established at eight points around Lake Nyasa and sites for automatic lake level gauges have been selected at various points on the lakeshore. In addition regular discharge measurements have been taken at sites established on the Shire, its tributaries and a number of rivers flowing into the lake and into Lake Shirwa. Water level recorders and rain gauges have been set up at strategic points, silt samples have been taken for analysis and cross sections have been made of a number of streams for comparison with sections taken at the beginning of the wet season.

(3) Soil Survey.

Dr. A.Muir, head of the Soil Survey of England and Wales, and an assistant arrived in Nyasaland on 20th May, 1953. They have been joined by an officer from the Department of Agriculture, Nyasaland and an officer from the Department of Agriculture, Northern Rhodesia. The team has started work in the Alimenda area of the Lower River.

(4) Entomological Survey.

Dr. Berner and Dr. Carr, of the University of Florida, U.S.A., have carried out an entomological survey of the Shire Valley from Lake Nyasa to the Zambesi. Their report has been submitted.

(5) Geological Survey.

A programme of core drilling is being undertaken at possible barrage sites on the Upper River and at the main hydro-electric sites. A preliminary report on the Mpatamanga site has already been produced by the Geological Survey Department. A geologist is being appointed to undertake full-time work on the survey.

(6) Air Mosaic Survey.

The valley of the Shire River from the southern border of Nyasaland to the Zambesi River has been photographed and a mosaic prepared. This has confirmed that it will

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be necessary to investigate the Ziu-Ziu to determine the effect on flooding in the Lower Shire of overspill from the Zambesi. A reconnaissance survey is to be undertaken during the present dry season.

(7) Irrigation.

The irrigation adviser to the Consulting Engineers, Mr. A.N.M.Robertson, has visited Nyasaland and has made a preliminary investigation of possible irrigation developments in the Shire Valley.

It is proposed to undertake a pilot irrigation scheme at Chikonje. A survey was therefore carried out and a scheme has been prepared in the London office of the Consulting Engineers.

Proposals are also under consideration for the development of a type of basin irrigation on Alimenda Estate wgich was vacated at the end of 1952 by Messrs Booker Bros., McConnell and Co.

(8) Hydro-electric.

Apart from the drilling of hydro-electric sites on the Shire River mentioned above, a preliminary reconnaissance of the Ruo River, a tributary of the Shire, has been made by the Consulting Engineers. A further reconnaissance will be made to find sites for flood control and hydro-electrical development.

IV. Portuguese Participation in the Project.

11. It early became apparent that any large scale hydro-electric scheme in the Shire Valley would not only affect the lakeshore areas of Tanganyika Territory and Portuguese East Africa but would also have an effect on the flow of the Shire after it had left Nyasaland for Portuguese Territory. The Tanganyika Government were informed of the proposal to maintain the lake at the level reached in 1937 and raised no objections. The Portuguese were more intimately concerned as not only would the final scheme have a considerable effect on the land lying between Port Herald and the Zambesi River but it also seemed probable that by direct participation in the scheme the Mozambique Government could derive considerable benefits for their own territory. From Nyasaland's point of view, Portuguese participation minimises possible Portuguese objection to the scheme since under international law they would have an undeniable right of dissent from any proposals affecting their use of the water of the Lake and Shire River.

12. In these circumstances it was decided that an approach should be made to the Portuguese Government and in July, 1951, the Governor of Nyasaland, together with Mr. Peter Scott of Sir William Halcrow and Partners, visited Lisbon for discussions with Sir Nigel Ronald, the British Ambassador in Lisbon, and the Portuguese officials concerned with Colonial affairs. At the various meetings which were held the Portuguese delegation showed enthusiasm for the proposals and offered to make a financial contribution towards the cost

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of the survey and, if the results of the survey were satisfactory, towards the cost of the final scheme. It should be mentioned that the question of Portuguese participation in the Shire Valley Project was considered in conjunction with the removal of the lakeshore boundary between Nyasaland and Portuguese East Africa to the median line of the lake, to which proposal the British Government had promised to give favourable consideration.

13. The discussions held in Lisbon in July, 1951, and subsequent negotiations culminated in January, 1953, in an exchange of notes between the British and Portuguese Governments which, in the words of the Portuguese note "constitute the preliminary accord between the Portuguese Government and Her Majesty's Government in the United Kingdom". The text of these notes has since been published.

14. The following are the main points of the agreement so far reached between the two Governments:-

(1) Her Majesty's Government are prepared to recognise in principle the median line of the waters of Lake Nyasa as the frontier between Mozambique and Nyasaland, it being understood that effect will be given to such recognition in an agreement concluded between the two Governments to define the line of the new frontier and to resolve the problem arising from the demarcation of the frontier in the lake area.

(2) The Portuguese Government, for their part, will assume the responsibility of taking part in the studies and work in progress with the object of controlling and utilising the waters of the lake and of the River Shire.

(3) The Portuguese Government accept liability for the cost of one third of the preliminary survey being made by Sir William Halcrow and Partners.

(4) If in the view of the Governments concerned the results of the survey are such as to warrant proceeding with the scheme, a joint corporation will be established to be responsible for (a) the construction of the dam and the stabilisation of the lake and river and (b) the production of hydro-electric energy.

(5) The establishment of such a joint corporation, its constitution and articles of association would be a matter for negotiation at a later stage. But the following are the main principle on which it is contemplated that the corporation might rest:-

(a) The Corporation to be established in the Nyasaland Protectorate, its Government holding the majority of the shares.

(b) The Corporation to be concerned not with the distribution of power but only with

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its production and sale in bulk at the power station to the Portuguese and Nyasaland Electricity Authorities. The capacity available to the Portuguese Government would then pass to their frontier by the transmission lines of the Nyasaland Electricity Authority, who would levy an agreed charge for this service. The subsequent distribution of power within the Portuguese East Africa border would be the concern of the Portuguese Electricity Authority. In the same way the Nyasaland Electricity Authority would be solely responsible for distribution of its share of the capacity within the Protectorate.

(c) The size of the Portuguese Government share-holding would be determined according to the contribution to be negotiated.

(6) As far as the secondary aspects of the scheme are concerned such as the reclamation of land and irrigation works, these would normally be undertaken by the Governments of each territory in accordance with their own requirements and at their own expense.

15. The financial effect of the Portuguese participation in the scheme will be that, according to present arrangements, one third of the cost of the survey will be borne by a grant from Colonial Development and Welfare Funds, one third by the Nyasaland Government and one third by the Portuguese Government. If the figures given in paragraph 9 above prove to be accurate each third part of the cost will amount to some £120,000. The extent of the Portuguese participation in the final scheme, if it proceeds, will, of course, be a matter for negotiation at a later stage.

V. Projects Stemming from the Survey.

16. The surveys and investigations which the Consulting Engineers have been asked to undertake will result in the eventual submission to the Nyasaland Government of outlined proposals for several separate projects. It has therefore been arranged that when the field work for each separate project is approaching completion, or as soon as sufficient information is available from the surveys, the Consulting Engineers will obtain confirmation from Government that the preliminary designs, planning and schematic work on that project is to be undertaken.

17. It is difficu t at this stage of the survey to give any idea of the exact nature and extent of the projects referred to in the preceding paragraph but they are likely to be concerned with the main general objects of the final scheme which follow:-

(1) As far as the lake itself is concerned the main object would be to overcome the vagaries of level which have been a major impediment to the development of transport facilities, fisheries and all types of lakeshore enterprise. For example stabilisation would greatly facilitate the improvement of ports on the lake and the irrigation of a considerable area on

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the southern shore of the lake.

(2) On the Shire River the production of hydro-electric power might well prove the most important part of the project as far as Nyasaland is concerned. There appears to be no reason why very considerable supplies of hydro-electric power should not be obtained at reasonable cost by the use of the Middle Shire. Such power would be of great value to the Southern Province of Nyasaland and to Mozambique for industrial development, for the improvement of public utilities and for lift irrigation.

(3) The other main purpose of the scheme would be the irrigation of large areas of potentially productive land in the Lower Shire Valley and the reclamation of land at present virtually useless owing to uncontrolled flooding. In Nyasaland such irrigation and reclamation might extend to more than 400,000 acres and it is also likely that river control would bring very substantial benefits of a similar sort to the area of Mozambique lying on the east bank of the Shire River adjoining and below the southern tip of Nyasaland.

18. The Consulting Engineers were recently asked whether they could provide some estimates, however tentative, of the probable cost of the various projects which might be submitted as a result of the survey. In reply they pointed out the difficulties of estimating at the present juncture seeing that development would be by stages and the ultimate development would depend on the success of the initial stages. They considered that final expenditure might be of the order of £50 to £60 million spread over a period of at least twenty to thirty years. More detailed consideration had been given to possible expenditure in the first two stages of development and this was tentatively estimated at £12 million and £18 million respectively, made up as follows:-

	Cost	Time to construct	Remarks.
irst Phase	£	Years	
per River.			
Barrage for control of Lake Nyasa and improvements to river channel.	500,000	3	Work might commence in dry season 1955.
ddle River.			
Hydro-electric scheme with flood storage	9,000,000	4-5	Might start in 1956.
Transmission to Blantyre	500,000	2	Timed to be complete when first power available.
Transmission to P.E.A. Border	1,000,000	2	
wer River.			
Initial flood control	1,000,000	2	Might be postponed until H.E.scheme is complete to avoid overstraining economy of Nyasaland.
Pilot Irrigation Schemes	500,000	1-2 each	First scheme could be in operation in 1954.
tal First phase (approx)	12,500,000	5-7	
cond Phase.			
per River.			
Pilot Irrigation Schemes	200,000	1-2	Depends on success of schemes for Lower River.
ddle River.			
Hydro-electric scheme (base load)	7,000,000	4	Timing of construction depends on increase in demand for power.
Transmission throughout Shire Valley	3,000,000	?	Gradual development as demand grows.
Additional transmission lines to P.E.A.border	2,000,000	?	Depends on growth of industry in P.E.A.
wer River.			
Reclamation and flood control	5,000,000	?	Gradual development as results of initial control work become apparent.
Irrigation Schemes	1,000,000	?	Depend on results of pilot schemes.
tal Second Phase (approx)	18,200,000	-	

LILONGWE/FORT JAMESON ROAD.

The improvement of the existing earth road from Lilongwe to Fort Jameson is a corollary to the development of the Lilongwe/Salima Road, since, in conjunction with the Lilongwe/Salima Road, the road from Lilongwe to Fort Jameson provides direct access for the eastern Province of Northern Rhodesia to railhead at Salima. Over this road, approximately 93 miles in length, passes a great deal of agricultural produce from the eastern Province of Northern Rhodesia, which Province also depends on this road for much of its requirements of stores, fuel and machinery. Traffic intensity is however not so great on this road as it is between Lilongwe and Salima.

2. In 1951 a sum of £140,000 was earmarked for the project from the Colonial Development and Welfare Fund Regional Allocation but no scheme could be made because the result of a survey, carried out by Consulting Engineers in 1951 revealed that the cost of reconstructing the earth road with tarmacadam on the steeper gradients and on the more acute bends would be in the region of £183.000. Subsequent investigations revealed that it would only be possible to reconstruct this road within the figure of £140.000 by dispensing altogether with bitumen which might not be satisfactory.

3. Although the priority for reconstruction of the road from Lilongwe to Fort Jameson is not so great as that for the Lilongwe/Salima Road, nor need the standard of reconstruction be so high, it remains a matter of some urgency that this project which has for long figured in Protectorate Development Plans, be put in hand as soon as possible. It is felt that it would be wise to make provision for the bitumenisation of certain bad sections of the road and, for this purpose the cost of reconstruction might now be as high as £250.000 which figure has been included in the present Development Plan.

4. It would be desirable to let a contract (documents have already been prepared) at the beginning of 1955 for work to be started at the end of the rains in April, 1955. It is estimated that the work of reconstruction would occupy approximately two years.

LILONGWE/SALIMA ROAD.

The Central Province produces at least half of the maize requirements of the Protectorate, a substantial proportion of the annual groundnut crop and is also the centre of the African Tobacco Industry. The produce of the Central Province is conveyed southwards by rail and the method of access to the railhead at Salima is by earth road from Lilongwe, a distance of about 71 miles. Return loads over this road consist of all the requirements both in stores, fuel and machinery of the Central Province and the greater part of the requirements of the Eastern Province of Northern Rhodesia. The importance of the Tobacco Industry to Nyasaland can hardly be over-estimated and the Industry is not confined to the area immediately around Lilongwe. Another centre exists at Kasungu, 100 miles north of Lilongwe where a considerable acreage has recently been thrown open to European cultivation and where a considerable development in the flue-cured industry has been realised. Tobacco from this area is also carried over the Lilongwe/Salima road. Again, westwards of Lilongwe, lies the tobacco producing area of Fort Jameson in Northern Rhodesia, and produce from this area also finds its way by road to railhead at Salima.

2. The present earth road is highly unsatisfactory, for despite the large sums that are regularly spent on its maintenance it is often impassable to heavy traffic during the rains. Furthermore the traffic intensity is over 200 vehicles per day with a high percentage of heavy diesel lorries with trailers. This an average figure which is exceeded during the height of the tobacco season. The rainy season in this territory can normally be expected to end during the month of April, the main season for the movement of tobacco southwards to railhead being May to July. The repair of the damage caused by the annual rains in time for the tobacco traffic peak is a recurrent problem to which no real solution seems to exist save the provision of a tarmacadam road. Such an improvement will have the effect not only of lowering costs of transport, but also of expediting the carriage of the agricultural produce already mentioned.

3. It has become clear that the Lilongwe/Salima road must be extensively improved and as a matter of high priority. The minimum standard which can handle the traffic is a twelve foot bitumenised carpet over the whole 71 mile length. It is envisaged that the contracting firm now working on the Limbe/Zomba road might be interested in starting work in the Salima area when the Zomba road works are completed towards the end of 1953. A location survey of this road to be followed by the preparation of contract documents is now being undertaken.

4. The ultimate cost of the project is very difficult to estimate at present. For a twelve foot bituminous surface costs would probably be in the region of £14,000 per mile and a figure of £1,000,000 has been included in the Development Plan.

5. It is hoped to let a contract at the beginning of 1954, the contractors to be on site by the 1st of April, 1954 at the end of the coming rains. It is tentatively estimated that the work would occupy four years.

LUCHENZA-MLANJE-PORTUGUESE BORDER ROAD.

In 1949 a contract was let for the bitumenization of the Zomba/Limbe, Blantyre/Chileka, Limbe/Mlanje/Portuguese Border roads. It is expected that this major project will be completed by early 1954 with the exception of the 33 mile section from Luchenza via Mlanje to the Portuguese Border. The contractors have terminated this original contract at Luchenza as at that stage they will have completed works to a certain agreed maximum value. The total cost will have approximated to £1,180,800.

2. A separate contract with the same firm has recently been let for the completion of the Luchenza/Mlanje section and reconstruction is already under way and should be completed by the end of 1954. The estimated cost for the bitumenization of this 15 mile stretch of road is £210,000 with a carriageway 12 feet wide.

3. The reconstruction of the road as far as the Portuguese Border would complete the bitumenization of the principal roads in the Southern Province serving and connecting the commercial centres of Blantyre and Limbe, the principal airport at Chileka, the administrative capital at Zomba and the main tea growing areas of the Protectorate at Mlanje and Cholo. Some 46% of all the tea produced in the territory comes from Mlanje District and of the Mlanje tea 85-90% is grown on estates between Mlanje District Headquarters and the Portuguese Border.

4. Contractors will, as mentioned above, be on site on the Luchenza/Mlanje stretch of road during 1954 and it is reasonable to assume that they would tender for any contract for the reconstruction of the road beyond Mlanje. It would clearly be desirable, were the necessary finance available, to let a contract with effect from the 1st July, 1954 in order that the contractors working towards Mlanje could continue beyond that point without interruption.

5. It is envisaged that the road should be reconstructed to the same specifications as that between Luchenza and Mlanje, i.e. a bitumenized carriageway 12 feet in width. This section of the road has not yet been surveyed, nor have any contract documents been drawn up. It is therefore extremely difficult to estimate the likely cost, but this should not exceed £350,000 on the assumption that work could continue on the Mlanje/Portuguese Border section as the present contractors approach Mlanje from Luchenza. If a contract is let on the 1st July, 1954 it is estimated that the work should be completed towards the end of 1956.

RECONSTRUCTION, OTHER INTERTERRITORIAL ROADS.

The roads included in this project are those from the Portuguese East Africa Border on the road from Salisbury as far as Chileka, where a bituminous surfaced road starts and continues into Blantyre; and the main north road from Zomba through Ncheu, Dedza, Lilongwe, Mzimba, Rumpi and Fort Hill to Tunduma.

2. The road from the Portuguese Border to Chileka is approximately 50 miles in length whereas the section of the main north road under consideration extends over 672 miles.

3. Traffic intensities on these roads range up to an average maximum of 100 vehicles, with peak intensities over comparatively short lengths of 500 vehicles per day.

4. Both these roads are narrow, 15-20 feet on average, and many sections wind through hilly or mountainous country with sharp bends and steep gradients. Very few of the bridges will carry Ministry of Transport loading and many of them are of temporary pole construction whilst others are lightly constructed of masonry, concrete or steelwork. Furthermore, the roads are inadequately drained and long sections lie below the general level of the surrounding country.

5. On the road from the Portuguese Border to Chileka it has been estimated that 14 miles require re-alignment through hilly sections; 16 miles must be raised above the level of the surrounding country and 27 miles require extensive side and ancillary drainage. An additional 178 culverts should be constructed; a 180 ft. Bailey bridge with 40 ft. approach span crossing the Mpatamanga Gorge should be replaced with a permanent bridge; one bridge more than 30 ft. span and 4 under 30 ft. should be brought up to Ministry of Transport standards. The whole length of the road requires widening and the surface should be stabilised.

6. It has also been estimated that the main north road has at least 600 miles which require widening, and it is probable that the surface must be stabilised over 70-90% of its length. Re-alignments are necessary over various lengths totalling approximately 100 miles; and extensive side and ancillary drainage is necessary over approximately 45 miles, with minor drainage works over the remainder of the length. Some 2,550 culverts are necessary. At present there is a ferry over the Shire River at Liwonde some 33 miles north of Zomba. This should be replaced with a bridge spanning approximately 600 ft. There are 8 bridges with spans less than 30 ft. and 9 with spans over 30 ft. which require immediate replacement, and a further 36 bridges with spans of over 30 ft. and 20 with spans of under 30 ft. are below Ministry of Transport standards.

7. This project provides for annual expenditure on these roads of £100,000 extending over a period of 10 years. It is not possible to prepare detailed schemes for reconstruction of specific sections until surveys and designs have been completed, but it is suggested that work at the rate proposed should be carried out with the minimum of delay.

8. It is considered that reconstruction of these roads should, over the next 10 years, be concentrated on the creation of first class gravel earth carriageways, with the possible exception of short lengths of bituminous surface where there are peak traffic intensities. It is most probable that road contractors would not be interested in this type of work, and it is thought that it will be necessary to create a departmental road construction

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organisation which can operate either as one large unit or as two smaller units to carry out the work in accordance with a detailed programme of priorities which will be drawn up at a later date.

AIR TERMINAL, CHILEKA.

By the end of 1951 Chileka Airport had been provided with first class facilities, including bitumenised runways and taxi tracks capable of taking any aircraft of medium capacity. The main runway is moreover capable of extension to take the largest aircraft. It is now essential to complete the facilities offered at Chileka by the construction of a modern terminal building. The project has figured for many years in the Protectorate Development Programme and it is necessary that the construction of the terminal should be accorded a high priority in the future development of civil aviation facilities in the Protectorate.

2. Plans and bills of quantities were completed in September, 1950 and tenders were subsequently called for. The lowest tender received was £73,267, and in November, 1951 the Terminal project had reluctantly to be set aside for lack of funds.

3. It is reasonable to assume that the longer construction is delayed the greater will be the eventual cost and the 1951 tender of £73,267 might well be greatly exceeded when tenders are again called for. The letting of a contract at the earliest possible date is therefore advisable from a financial point of view and the present temporary terminal is already too small for the traffic offering. To allow for the rise in building costs since 1951 an estimate of £80,000 has been included in the Development Plan, the proposed period of construction being 1954 to 1956. Other ancillary works at Chileka provided for in the Plan include a transmitter station, taxi track stores and a hangar at a total estimated cost of £47,000.

4. As a stop-gap measure, a temporary air terminal building was constructed in 1950 at a cost of some £5,000, using materials which it will ultimately be possible to recover for use elsewhere. The present Terminal facilities at Chileka are, however, meagre in the extreme and have for some time been inadequate to handle the increasing traffic at the Airport. The manner in which traffic at Chileka has increased in recent years is illustrated in the following table:-

	1950	1951	1952
Aircraft Movements	1,488	1,881	2,148
Passengers handled (in)	2,742	4,227	4,764
Passengers handled (out)	3,047	3,883	4,870
Mail in Kilos (in)	28,315	27,568	37,462
Mail in Kilos (out)	9,284	14,785	22,290
Freight in Kilos (in)	23,553	121,873	144,252
Freight in Kilos (out)	23,227	23,858	35,743

SALIMA AIRPORT.

The existing airstrip at Salima with its grass runway has, in the past, served its purpose well, but it is inadequate to meet the heavy demands made on it by Viking aircraft operating the tourist services from Salisbury. The present runway is grass surfaced and is usually unserviceable during the rainy season for aircraft with an all up weight in excess of 5000 lbs. To keep the existing runway in a safe condition for use by Viking Aircraft during the dry season is a constant problem which can only be solved by the construction of an all-weather runway at Salima. At present considerable soil erosion is caused during take off by the Vikings, and officials of the Central African Airways Corporation have frequently pointed out that aircraft of the Viking type could be severely damaged by operation on to and from rough airstrips such as that at Salima.

2. Bound up with the question of the inadequacy of the airfield facilities at Salima is the vital matter of developing the Southern end of Lake Nyasa as a tourist centre. Considerable improvements in the hotel facilities at Salima have already been made, and will continue to be made with the object of turning Salima into a recognized and well equipped holiday resort serving the Rhodesias and Nyasaland. Clearly the development of Salima in this manner calls for a considerable improvement in the facilities provided at the present airfield; improvements moreover which would make air access to the lakeshore hotels both possible and safe throughout the year.

3. By reason of the fact that Salima lies at the southern end of the Fort Jameson-Lilongwe-Salima road, and the northern terminus of the Nyasaland Railways, commercial and passenger traffic is likely to build up at this point.

4. Finally there is a pressing need to provide a landing ground as an alternate to Blantyre Airport, to which aircraft could be diverted in bad weather, and an all-weather airfield at Salima would provide an admirable alternate.

5. Consulting Engineers have investigated the possibilities of constructing an all-weather airport in the vicinity of Salima. They have recommended that the existing airfield is unsuitable for development as a permanent all-weather airport, and have suggested an alternative site. The construction proposals include one runway and taxiway with foundations of crushed stone and a standard stone asphalt surfacing 2 inches thick, designed to take a single isolated wheel load of 30,000 lb. The rest of the site would be suitably grassed. The runway will be designed to take medium sized aircraft but the site chosen will make possible an extension of the runway to take the largest type of operating aircraft should this ever prove necessary. The estimated cost of the project including ancillary buildings is £400,000.

6. The preparation of contract documents is now in hand and it would be proposed to let a contract early in 1954 in order that work could be started immediately after the rains in April 1954.

LILONGWE AIRPORT.

The number of aircraft movements through the present airfield at Lilongwe the capital of the Central Province, have now increased to such an extent that the facilities available are dangerously inadequate to cope with the air traffic.

2. Prior to 1951, only light aircraft of the Beaver type made use of the airfield, but in 1951/52 the traffic began to increase with the introduction of the WNLA/AFRICAIR air lift operating between Bechuanaland and Lilongwe, using Dakota aircraft. These services have steadily increased and in 1953 additional services with Dakota aircraft were introduced by Central African Airways, operating between Blantyre and Lusaka. The result is that the large number of Dakota aircraft are causing considerable damage to the grass runways, as in the case of Salima.

3. The increase in traffic through Lilongwe is shown in the following table :-

Aircraft Movements			1950	1951	1952
			804	1194	1546
PASSENGERS	(IN)		353	3,696	5,628
"	(OUT)		383	4,063	5,765
FREIGHT	(IN)	KILOS.	13,042	13,021	14,710
"	(OUT	KILOS.	1,831	6,041	7,583
MAIL	(IN)	KILOS.	5,484	8.266	9.308
"	(OUT)	KILOS.	1.494	2.567	5.541

4. The topography of the present airfield is such that a great deal of money would be required to construct even a second rate airfield, and in any case the area is earmarked for European housing under Town and Country Planning proposals. It has therefore been decided that if a new airfield is to be developed at Lilongwe a more suitable site is essential. This has been located approximately one mile to the North West of the present site, and has been provisionally surveyed by the Consulting Engineers who confirm that a first class airport with two runways can be constructed. It will be possible to extend the main runway to 2,500 yards and the subsidiary one up to 1,500 yards.

5. Until a detailed survey of the site has been undertaken no firm estimate of cost can be made, but present indications are that it may exceed £400,000. It is not expected that contractual capacity will permit a Start to be made on this project until work on the Salima Airport and the Lilongwe/Salima Road is well advanced and in the Development Plan no expenditure is envisaged until the financial year 1956/57.

HARBOUR DEVELOPMENT.

Lake Nyasa is the natural link between the North and South of the Protectorate, and the policy of the Nyasaland Government is to develop the Lake and the Nyasaland Railway system as the main communication arteries. At the moment harbour facilities are of a most primitive nature with the result that the turn-round of lake vessels is seriously impeded. At present, with the exception of Chipoka, where the railway connects with the Lake, no port has been provided with a wharf or jetty. Yet since 1944 the tonnage carried by the Lake Service has increased by 65% and may increase by as much as 100% in the near future.

2. At the present moment, with financial assistance from the Colonial Development and Welfare Fund, a full scale hydrographic survey of certain ports in the Central and Northern Provinces is being undertaken by the firm of Sir William Halcrow and Partners. This survey should be complete before the end of 1953 and upon the report of the surveyors will depend the next steps to be taken.

3. It is expected that wharfage facilities will be required at Kota Kota in the Central Province to facilitate the export of rice, at Nkata Bay the main port of the Northern Province and at a suitable port in the Karonga District in the extreme north of the Protectorate, an important centre for rice and cotton production.

4. Pending receipt of the surveyor's report, no firm details can be given, but it is clear that the improvement of harbour facilities will have to begin as soon as possible. A very rough estimate suggests that the works envisaged would involve expenditure of about £100,000 and this figure has been included in the Development Plan with an annual rate of expenditure of £30,000 over the period 1954/1957.

POSTS AND TELECOMMUNICATIONS.

The present development which has been undertaken in the Post Office, Nyasaland, since 1950, was designed to provide for the extension of all services. Broadly speaking with the money available it has been possible to expand very considerably the services in the Southern Province, and those in the Central Province to a lesser degree. Very little development has taken place in the Northern Province except for the opening of two or three additional Post Offices, and a number of Postal Agencies. This policy was dictated by the necessity to utilise the loan funds in a manner which would produce the maximum increment in revenue. Whilst a number of buildings were improved sufficiently to enable business to be transacted with a reasonable degree of efficiency the funds have not - and were not intended - to provide for extensive rebuilding of the larger offices except in the case of Lilongwe and Limbe.

2. The Development Plan for the next five years falls broadly into three sections:-

(a) The rebuilding at a number of centres, of offices where business has grown so greatly during the last three or four years. that they are no longer adequate to deal with the volume of business. This applies to the Headquarters buildings in Zomba at present, and will soon apply to the Blantyre offices, whilst in a very large number of smaller Post Offices the staff accommodation and accommodation for counter business is completely inadequate. Up to the moment practically no provision has been made for staff welfare, i.e. for canteen facilities at the larger offices together with rest rooms; nor have facilities been provided for staff to hang their wet clothes during the rains. A number of additional offices will be required to cope with the normal growth of Post Office business.

(b) Engineering development which includes the expansion of existing facilities to cope with increased traffic, and to provide for more reliable facilities on existing circuits together with the new facilities demanded by the public. As an example, a much improved trunk link is required between Nyasaland and Southern Rhodesia, not only to cope with the anticipated increases in traffic, but also to provide for the several teleprinter private wires which are being demanded by the public between the two territories and which it is not at present possible to supply. It must be assumed that telephone development will continue, and it is necessary to open up the Northern Province to telephone service.

(c) Postal and telegraph services will continue to expand and the estimates are designed to cater for expansion based on present growth.

3. Provided that development funds are allocated on the basis of the estimates it can be assumed that the present rate of increase of revenue should be maintained throughout the development period. In this connection the following figures of increased revenue are of interest :

Total/....

Total hard cash revenue

1950	£ 80,588	(base 100)
1951	£112,605	(140%)
1952	£134,270	(167%)

In addition it is to be anticipated that in the Federal Service all book revenue will come into commercial accounts in addition to the hard cash revenue. The value of book revenue over the last three years is as follows :-

1950	£14,700	(base 100)
1951	£24,472	(167%)
1952	£32,869	(224%)

EUROPEAN PRIMARY SCHOOLS BLANTYRE AND LILONGWE.

The present facilities for European primary education in the Protectorate are completely inadequate. Since the war the European population of Nyasaland has increased rapidly; there are now long waiting lists for all the European Primary Schools and Hostels.

2. The original building at St. Andrews School, Blantyre, which was acquired from the Church of Scotland in 1947, consisted of only two class-rooms and a hall. In 1949 an annexe was built containing two further class-rooms and since then it has been necessary to sub-divide the larger of the two original class-rooms bringing the total number of rooms available to five. All these rooms are now filled beyond their capacity. The Hostel, formerly run privately, was purchased and taken over by Government in 1949. It is small and unsuitably sited, even in relation to the present school site.

3. The numbers of day and boarding pupils enrolled have increased rapidly in recent years. At present there are 130 day pupils and 23 boarders. By 1955 it is expected that these numbers will have risen to 150 day pupils and 40 boarders, and by 1957 to 180 day pupils and 60 boarders. In order to meet the demand for primary school facilities in the Blantyre/Limbe area, a building programme at St. Andrews is envisaged as follows:-

(a) 1954/55: Construction of 10 class-rooms and ancillary staff rooms and a hostel to accommodate 40 boarding pupils;

(b) 1955/56: Construction of a library and a gymnasium and the clearing and levelling of playing fields;

(c) 1956/57: Construction of a secondary school block with five class-rooms, and an extension to the Hostel to take an additional 40 boarding pupils.

4. The estimated cost of this project, which it is envisaged will be undertaken by contractors, is £69,400 in 1954/55, £4,500 in 1955/56, and £20,400 in 1956/57.

5. The European population in the Northern and Central Provinces has also increased rapidly in recent years and it is unlikely that the present facilities for primary education in Lilongwe will be adequate for long. A further increase in the European population in this area is expected, particularly as a result of the current development of the resources of the Northern Province and the expansion of marketing activities.

6. The present enrolment of pupils at Lilongwe consists of 33 day pupils and 12 boarders. By 1955 it is expected that these numbers will have increased to 42 day pupils and 28 boarders and by 1957 to 50 day pupils and 50 boarders. The following building programme is therefore proposed:-

(a) 1954/55: Construction of two class-rooms and a hall (£2,500);

(b) 1955/56: Construction of the second and third wings of the Hostel, to accommodate a total

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of 70 boarding pupils (£21,000);

(c) 1956/57: Construction of two further class-rooms and the clearing of a playing field (£3,000).

It is expected that this work will be undertaken by the Public Works Department.

7. The recurrent committments involved in the proposed extensions to St. Andrews School, Blantyre, are estimated at approximately £6,000 in 1954/56 rising to and levelling at about £10,000 per annum in 1956/57. For the Lilongwe School additional recurrents will amount to approximately £3,500 in 1954/55 rising to some £6,000 per annum from 1956/57 onwards.

HIGHER EDUCATION.

The provisions which apear in the Development Plan for Higher Education are based on the assumption that each student will undertake a 3 - year course at the new Central African University and that the cost per student at the University will be approximately £450 in the first year decreasing by £50 per annum until the fourth year when it should level out at £300 per annum.

2. The expected annual intake of students from Nyasaland over the period 1954 - 1958 is as follows:

	1954/55	1955/56	1956/57	1957/58
European	8	10	13	15
Coloured	-	1	1	2
Asian	2	4	6	8
African	20	25	30	40
Total	30	40	50	65

Thus the total enrolment of Nyasaland students over this period is expected to be:-

European	8	18	31	38
Coloured	-	1	2	4
Asian	2	6	12	18
African	20	45	75	95
	30	70	120	175

3. It is further assumed that European and Asian students will not be able to pay more than £100 per annum towards the cost of their university courses and that African and Coloured students will not be able to make any contribution. Thus for each European and Asian student a scholarship of £350 per annum will have to be provided in 1954/55, decreasing annually by £50 to £200 in the fourth year of the University's existence, while for each African and Coloured student in 1954/55 a scholarship of £450 will be necessary decreasing by £50 per annum to £300 in 1957/58. The total amount to be disbursed by way of scholarships is therefore as follows:

	1954/55 £	1955/56 £	1956/57 £	1957/58 £
European	2,800	5,400	7,750	7,600
Coloured	-	400	700	1,200
Asian	700	1,800	3,000	3,600
African	9,000	18,000	26,250	28,500
Totals	12,500	25,600	37,700	40,900

LEPROSY SETTLEMENT - KOCIRA.

During 1950 the inter-territorial leprologist of the East Africa High Commission carried out a leprosy survey of Nyasaland. This survey revealed an overall incidence of 14 persons per-thousand of population affected with leprosy. This gives an estimated total of 31,500 lepers in Nyasaland and of these it is estimated that 22,. are in the acutely infective stage of the of the disease. The leprologist made certain recommendations which Government has accepted in principle. The chief of these was that a Central Government Leprosarium, capable of accommodating 1,000 patients, should be constructed. This Leprosarium should have a full European medical and nursing staff and should act as a centre and stimulus for all other leprosy work in the Protectorate.

2. Government has obtained a suitable site of some 2,500 acres in the Fort Manning District, close to a main road and situated roughly midway between the north and the south of the Territory. Work has already begun on the construction of the buildings and on the development of water supplies. The original estimate for the cost of the building was £45,000, but this figure was based on East African costs pertaining during 1950. Since that time building costs have risen considerably and the present estimate for the construction of the leprosarium is £78,000.

3. The plans which have been drawn up provide for construction over a four year period under four different heads; staff housing - £11,600, patients housing - £12,500, settlement buildings (hospital, administration, etc.) - £23,340, and estate development (including site works) - £30,550. Annual expenditure is estimated as follows:-

1953/54	£35,500
1954/55	23,500
1955/56	9,500
1956/57	9,500

It is estimated that the construction of the Leprosarium will be completed by 1957 and thereafter that the recurrent expenditure will amount to approximately £10,000 per annum after the earnings of the estate have been taken into account.

4. Arrangements have been made to finance 1953 capital expenditure by means of a £10,000 grant from the Brown Memorial Trust Fund and a loan of £14,000 from the Native Development and Welfare Fund. It is uncertain whether any further assistance can be expected from the Brown Memorial Trust.

GROUP HOSPITAL, BLANTYRE.

Since 1938 there have been successive proposals for the construction of a Government Hospital for all races in the Blantyre/Limbe area. The only hospital service for Africans and Asians is that maintained in buildings which are the property of the Church of Scotland Mission, and the Mission maintains 60 female general and maternity beds towards which Government pays an annual subsidy. The male wards, containing 63 beds, are staffed and maintained by Government. This is an arrangement which came into force in 1943 for a period of five years, during which time Government intended to build a new Group Hospital. The finances of the Territory were, however, unable to support a capital expenditure estimated at some £415,000 during this five year period. The result has been that the mission buildings have now been occupied for upwards of ten years, and the Church of Scotland is now pressing for the buildings to be returned for Mission use. The existing wards are old, dilapidated and inadequate, and it is therefore a matter of considerable urgency that the construction of a modern hospital in the Blantyre/Limbe area should be undertaken without delay.

2. It is envisaged that the new hospital should take the form of a Pavilion type building to be constructed in three stages as follows:-

First Stage:

24 European beds, 24 Asian beds, 10 European maternity beds, 10 Asian maternity beds, 168 African general beds. Other buildings will include a service block, casualty, out-patients, dental, and X-ray Departments, designed to serve the first two stages of development and so constructed as to permit of further extension.

Second Stage:

An extension of up to 420 beds, including provision for African maternity wards.

Third Stage:

Extensions up to a maximum of 600 beds.

3. It is proposed that the Group Hospital be constructed by contractors and layout plans were drawn up by Consulting Architects in conjunction with a Group Hospital Planning Committee established in 1951. These plans have now been approved by the Blantyre and Limbe Town and Country Planning Committee. Working drawings and plans have also been completed for a nursing sisters' hostel, which, it is envisaged, will be the first building to be constructed on the site and will serve to house constructional staff while the building of the hospital is in progress; drawings have also been prepared for the various types of European and African housing required and those for the administrative and operative sections of the hospital are now in the course of preparation.

4. Consulting Architects are now engaged on the preparation of bills of quantities. It is intended that all other work in the administration and finalization of contract documents will be undertaken by the Public Works Department staff. Until bills of quantities are available

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and contract documents drawn up it is impossible to estimate with any accuracy the overall cost of the project, but a tentative estimate of £750,000 has been inserted in the Development Plan, showing an approximate rate of expenditure of £250,000 per annum over a period of three years. It would be desirable for constructional work to begin on the 1st April, 1954.

IMPROVEMENTS AND EXTENSIONS TO EXISTING HOSPITALS - £86,000.

There are at present three European Hospitals in the Protectorate providing a total of 38 beds, of which 8 are set aside for maternity cases. The daily average of inpatients in the Zomba and Blantyre Hospitals indicates an adequacy of bed accommodation for some years to come. At Lilongwe, however, more beds are required and by building an extension to the hospital which will give a new operating theatre and ancillary rooms, space will be released in the existing building to provide enough beds to meet the needs of the next five years. The estimated cost of these extensions is £3,500.

2. The 19 African Hospitals have a total bed strength of 1,115. During 1952 the daily average of in-patients in all Government Hospitals was 1156.5. Now that there is a full establishment of medical officers and an increasing degree of better trained African auxilliaries, the length of stay in hospital has been considerably reduced and the time has arrived when it is essential to increase the number of beds at the large provincial and district hospitals.

3. Priority will have to be accorded to the provincial hospitals at Lilongwe and Mzimba where gross over-crowding now occurs, despite an accelerated turnover. In addition provision will have to be made for medical services at the new Provincial Headquarters at Mzuzu. Further developments in certain districts are such as to require more adequate services to enable medical officers to develop to the full the curative work of the hospitals which will take some of the load off the better equipped provincial hospitals.

4. Of the 19 District hospitals only five have a fully or partially reticulated water supply. Only two of the African hospitals have full waterborne sanitation. The provision of water and sanitation to the District hospitals is therefore a matter of great urgency.

5. The majority of the African hospitals were built in the early 1930's. Kitchen and laundry arrangements are primitive and also require urgent attention.

6. There is an increasing demand for maternity services at the larger district hospitals and until there is an adequate number of district midwives, greatly increased maternity accommodation is essential.

7. The estimate of £86,000 is based on the following allocations to the respective services:

	£
Increased general ward accommodation, Lilongwe, Mzimba, Fort Johnston, Deiza and Karonga, and conversion of C.D.C. hospital at Mzuzu into a Health Unit.	28,000
Increased maternity ward accommodation. Lilongwe, Mzimba, Ncheu and Deiza.	14,000
New theatres, X-Ray accommodation and storage space, Lilongwe, Mzimba, Zomba, Fort Johnston and Deiza.	10,500
Water supplies, sanitation and arrears of maintenance. All hospitals.	26,500
Contingencies.	7,000
Total	86,000

EUROPEAN HOUSING.

In the absence of any private firm with the capacity to finance the construction of housing for lease to Government, housing for Government's European staff is a recurrent problem, and even now insufficient houses are available for existing staff and it is very rare for an officer who goes on leave to return thereafter to his earlier house. Moreover on many occasions the recruitment of staff has had to be postponed for lack of accommodation. The principal cause of the shortage is lack of the necessary funds to carry out a full programme of house construction. An adequate house costs £4,500 if built by the Public Works Department, and above £6,000 if built by contractors. The Public Works Department has not the capacity to build many.

2. Yet it is the Public Works Department which most needs housing if the development of the territory is to be maintained, and it is desirable to initiate an early programme of house building. Even after Federation however it does not seem likely that the Nyasaland Government will dispose of sufficient funds to enable the programme to be executed expeditiously and it is accordingly suggested (and has been written into the plan) that the Federal Government should provide the capital cost of constructing the housing required for its own officials.

3. It is clearly beyond the resources of the Protectorate to cater for all European housing requirements; indeed these have not even been assessed. It is likewise beyond the capacity of the Protectorate to make provision for the full housing requirements in respect of the extended Development Plan. What has been done is to write in to the Development Plan a programme of European housing commensurate with what is considered to be the works and contractual capacity of the Territory. This capacity is estimated at approximately £150,000 worth of housing per annum, of which it is estimated that at least one-third will be in respect of Federal Departments.

AFRICAN HOUSING.

During the development period 1948 to 1952 a sum of £300,000 was spent on the housing of African Government staff and during 1953/1954 a further £126,000 will it is estimated be spent. This heavy programme of construction has been largely financed by grants from the Colonial Development and Welfare Fund, but even a level of expenditure of this order has been quite insufficient to cover immediate requirements in respect of African staff housing and over 50% of Government's employees are still housed in temporary buildings or in their own villages. For example, only 6% of the staff of the Department of Agriculture have permanent houses and no fewer than 76% of the staff of this Department are either housed in simple wattle and daub huts or are without departmental accommodation altogether. Similarly in the Posts and Telecommunications Department there are still a large number of staff awaiting housing and it is frequently impossible to arrange for leave to be taken by existing members of the staff owing to the lack of housing available for reliefs. The preparations for commissioning this year of the new Power Station in Blantyre have seriously aggravated the already grave housing situation in the Blantyre/Limbe area.

2. Expenditure from the Nyasaland Development Loan during the period 1948 to 1953 was planned on the assumption that funds would be available from other than loan sources for the housing of Africans to be employed on development undertakings, and the provision made in the Loan Schedules related to the ordering of equipment, the construction of works or office buildings, installation of plant, other civil engineering works and the employment of staff necessary for the execution of those works, no provision being made for the housing of African employees. To some extent funds from other sources have in fact been forthcoming during this period and the substantial grants from the Colonial Development and Welfare Fund have done much to relieve the housing position in Nyasaland in recent years. In some cases however the housing problem has arisen in a serious form with the advancement of development undertakings to their final stages. In the initial years of the Electricity Services and Postal and Telecommunications Development Programmes, while orders were being placed and ground work carried out, a large demand for African housing did not exist. At the present stage however, when the completion of the installation of the Main Power Station plant at Blantyre is in prospect, it has become apparent that unless housing can be provided for a large number of African artisans and other employees, the implementation of Development Schemes such as this will be delayed and there will be serious financial loss. This position is likely to be further aggravated by the proposed extension of the Development Programme over the next three years, with further large undertakings in respect of the Posts and Telecommunications, Electrical, Civil Aviation and Medical Departments. The necessity for adequately housing the higher grades of Government employees cannot be over-emphasized, since a shortage of permanent houses is a serious obstacle to recruitment of the right type of employee and makes transfers of staff extremely difficult to carry out.

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3. It has therefore been necessary to write in to the Development Plan a programme of African housing commensurate with the works capacity and the contractual capacity of the Territory. As far as can be ascertained at present this capacity will amount to approximately £120,000 worth of housing per annum, of which one third, it is thought, should be devoted to housing employees of Federal Departments. Expenditure at this level will not be sufficient to house as many employees as might be wished, but it should cover those employees who are concerned with major developmental projects and thus facilitate the implementation of the Development Plan.

4. It is expected that most of the housing required for the Federal Departments, i.e. Posts and Telecommunications, Electrical Services and Medical Services, will be situated in the principal townships and that the work can be conveniently undertaken by contractors. The requirements of the Territorial Departments, particularly those on out-stations, will either be built departmentally or by the Public Works Department.

The Town Planning estimate for the period 1954 to 1957 of £49,000 includes an element of recurrent expenditure at the rate of approximately £7,000 per annum. The present staff of the Town Planning Section, which comprises a Town Planning Officer and a Draughtsman, cannot deal with the ever-increasing amount of work which it is required to handle and in the circumstances it is considered that an Assistant Town Planning Officer and a second Draughtsman should be added to the present establishment. Normally a Survey Staff is attached to a Town Planning Office to carry out the various surveys essential for Town Planning purposes. It is considered important that the Town Planning Office should have at least one permanent surveyor attached to its staff and provision has also been made for this post in the recurrent estimate of £7,000 per annum, quoted above.

2. The balance of approximately £28,000 of capital expenditure is to provide for the aerial survey of townships scheduled for planning as follows :-

(a) 1954/55: Mapping of Salima and the photographing and mapping of Mzuzu;

(b) 1955/56: Further mapping in respect of the Blantyre/Limbe area and the mapping of Karonga;

(c) 1956/57: Mapping of Dedza and Luchenza.

3. The estimate of £28,000 also includes provision for the implementation of the Town Planning Schemes in respect of Salima, Blantyre/Limbe, Luchenza and Zomba, and provision for the purchase of a vehicle for the survey party.

CUSTOMS SHED AND QUEENS WAREHOUSE, BLANTYRE.

The present Customs Shed accommodation in Blantyre rented from the Nyasaland Railways is totally inadequate. Until a few years ago, all traffic, rail road and air was handled in the Railway Shed. Now rail cargo alone more than fills this shed so that other cargo has to be stored elsewhere in a number of temporary sheds erected in and around Blantyre Township. As a result of the shortage of space for the storage of goods which cannot be cleared by the Customs Authorities for home consumption, congestion is caused and the turn- round of railway trucks is frequently delayed. All this results in loss of revenue. Blantyre is in fact rapidly becoming a "bottleneck" and moreover the Railways require the use of the present main customs shed for their own purposes.

2. It is therefore proposed to erect in Blantyre a building which will serve as a Customs and Transit Shed and also as a Queen's Warehouse, together with the necessary office accommodation.

3. Working drawing have already been prepared for the office block and drawings for the Shed should be available by the end of 1953. The total estimated cost of the project is £30.000 but it will not be possible to make provision for construction during the first half of 1954.

4. The following table shows the manner in which cargoes imported to, through and from the Protectorate have increased in recent years, leading to the present state of congestion in Blantyre.

Year	Imports in tons	Exports in tons	Total in tons
1949	99,783	36,711	136,504
1950	111,084	39,752	150,836
1951	108,355	54,420	162,775
1952	115,012	81,875	196.887

K. A. R. BARRACKS.

The existing Barrack Buildings in Zomba are very old and dilapidated, having suffered from insufficient maintenance for many year. As a result the present annual provision which it is necessary to make for maintenance, in order to keep the buildings standing, is out of all proportion to their value and is likely to increase rapidly so long as the present buildings remain in use. It is now apparent that the type of African accommodation provided at the K.A.R. cantonment is out-moded and that it contrasts most unfavourably with the facilities enjoyed by the troops while on overseas service.

2. In 1951 a War Department Board of Survey was held with the object of deciding what replacements and what new construction was required. The board consisted of representatives of East Africa Command, the Nyasaland Government and the K.A.R. in its Report the Board stated that "all existing living accommodation is much below standard and in a very bad state of repair". The Board further recommended the demolition of all askari accommodation with the exception of two blocks of fifteen rooms each, which are more modern than the rest.

3. The major new constructional works required are as follows:-

(a) African Other Ranks Lines:

The present buildings, which were built with askari labour soon after the 1914/18 War, are completely ant-infested in the foundations, walls and roofs. The majority of the floors have, at some time, been cemented on bricks laid in a mud base and have disintegrated leaving a broken surface which cannot be patched and in which ants and other insects thrive. The mud brick walls are crumbling and the roofs, some of which are thatched and others roughly covered with felt laid directly onto forest poles, are ant-infested, and in nearly all cases leak badly. These quarters are completely unhygienic and in a ruinous condition. They are definitely far below the standard laid down by the War Department. It is proposed that 618 new quarters of various grades be constructed, together with ancillary buildings, such as latrines, wash houses and laundry blocks.

(b) Offices and Stores:

The present accommodation is too small and badly needs re-siting. Storage space is totally inadequate and there is no building in which signals, mortars or the Band can carry out the necessary instructional periods of training and in which their valuable stores can be kept.

(c) European Quarters.

The present European houses are well below the standard laid down by the War Department. There are too few of them, and in spite of the fact that in some cases officers and British Other Ranks are sharing houses, it is impossible to accommodate all British families. It is proposed to construct four new Officers' Married Quarters, eleven British Other Ranks Married Quarters and to extend the single Officers' Quarters.

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(d) Motor Transport Accommodation:

At present there is no adequate covered garage accommodation and this is considered essential, since constant exposure to sun and rain causes rapid deterioration of vehicles. The present accommodation for the Workshop Detachment is also inadequate and must be improved if the Detachment is to maintain the vehicles of the Battalion.

(e) Other Works:

Other works which require implementation, and as a matter of urgency, include the rebuilding of the Ammunition Store, which at present is sited dangerously close to the Stores and Offices, the provision of a Gas Chamber, the provision of a system of main drainage latrines in order to maintain an adequate standard of hygiene in such a close living community, and the electrical wiring of all buildings.

4. A phased programme for the reconstruction of the Barracks has been drawn up, the order of priorities being as follows :-

(1) Rebuilding of African Other Ranks Quarters.

(2) Provision of additional European Accommodation.

(3) Other Works as demanded by the progress of the above.

5. Work has already begun on the reconstruction of the cantonment with the small Military contribution which the Protectorate makes annually. On this basis the work would take a quarter of a century to complete. It is now proposed that contractors should undertake the work, and contract documents are being drawn up with this in view. Until the contract documents are drawn up it is not possible to make a firm estimate of the likely cost of reconstruction, but with the information available at present, this is likely to be of the order of £750,000. It is desirable that work should begin early in 1954 and in the Development Plan the project is shewn as occupying a period of five years with an approximate rate of expenditure of £150,000 per annum.